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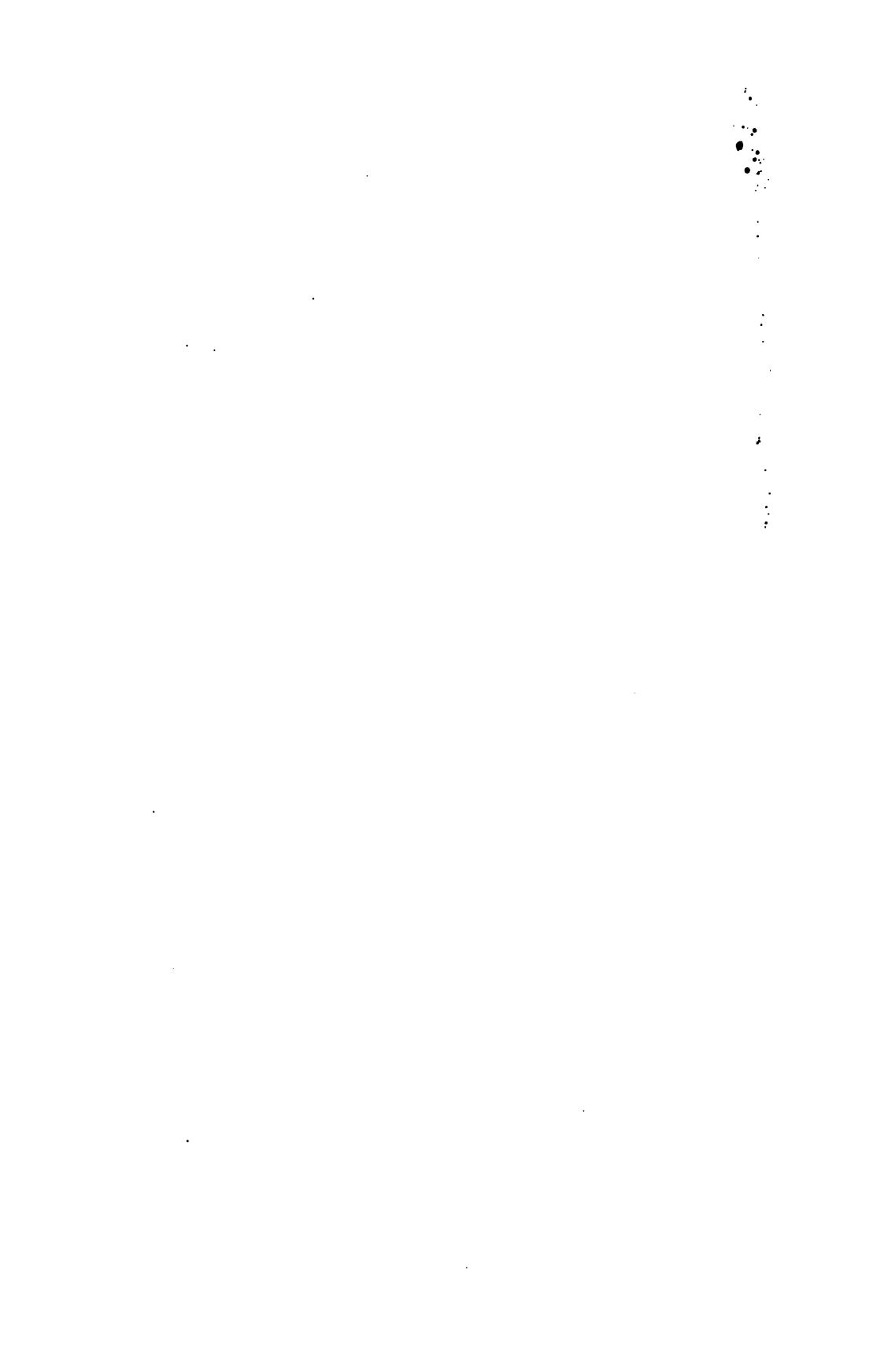


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PLATES

ILLUSTRATING A NEW EDITION

*James Gregorie
Wards 1816* OF
FERGUSON'S LECTURES

ON

*MECHANICS, HYDROSTATICS, HYDRAULICS, PNEUMATICS,
OPTICS, GEOGRAPHY, ASTRONOMY, AND DIALLING.*

EDITED AND ENLARGED

BY DAVID BREWSTER, A. M.

THIS AMERICAN EDITION, CAREFULLY REVISED, AND CORRECTED

BY ROBERT PATTERSON,

PROFESSOR OF MATHEMATICS, AND TEACHER OF NATURAL PHILOSOPHY, IN THE
UNIVERSITY OF PENNSYLVANIA.

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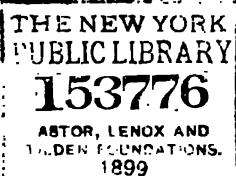


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PLATE I

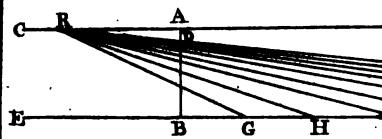


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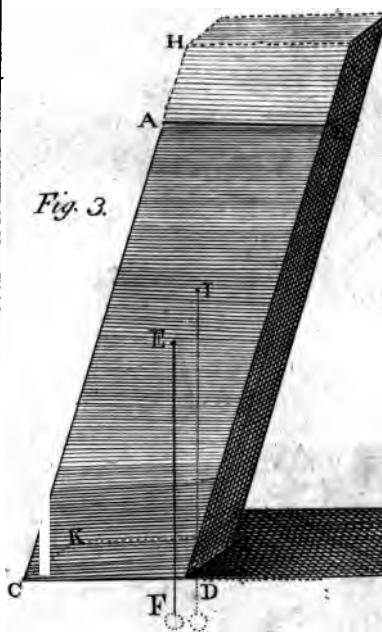
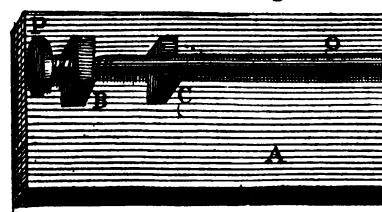
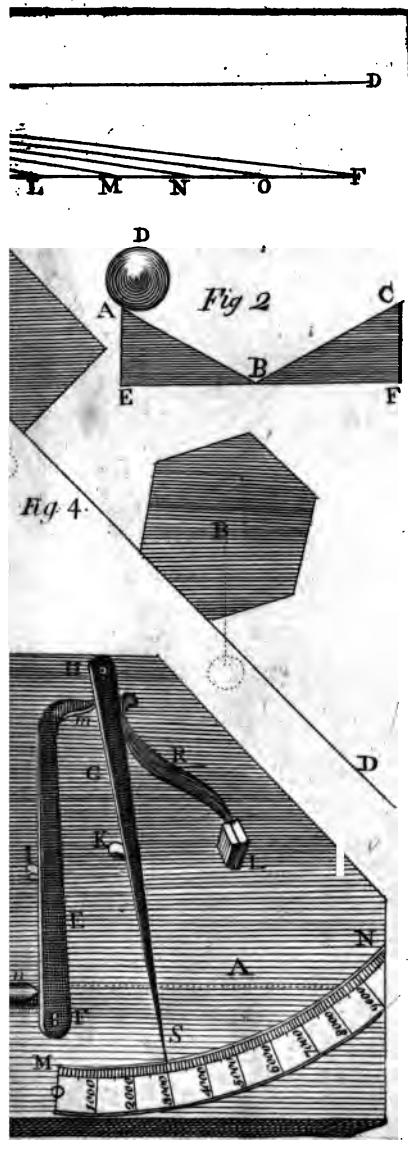


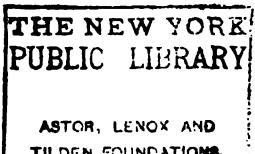
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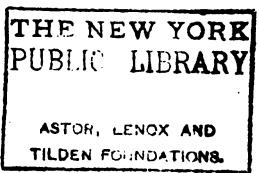
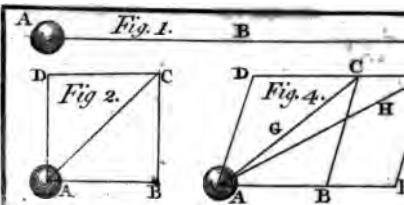
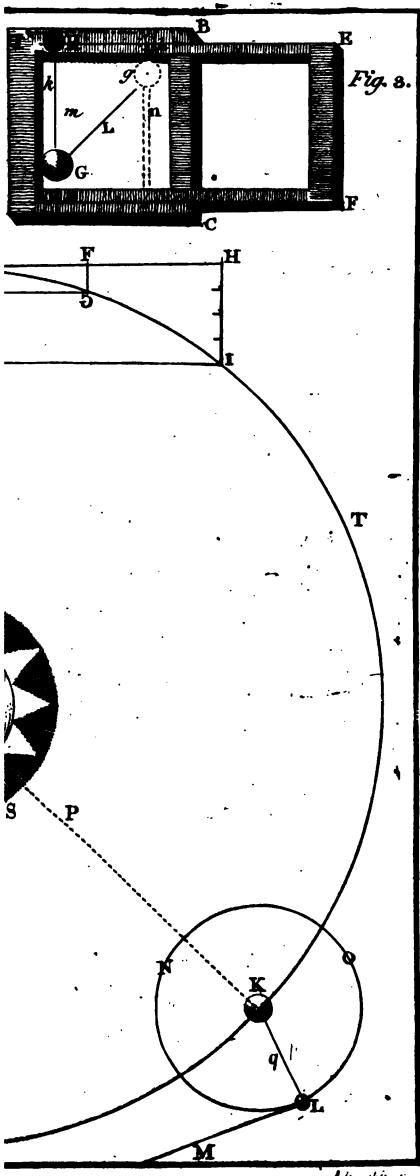


PLATE II.





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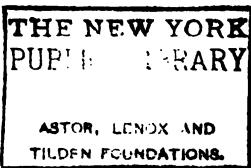
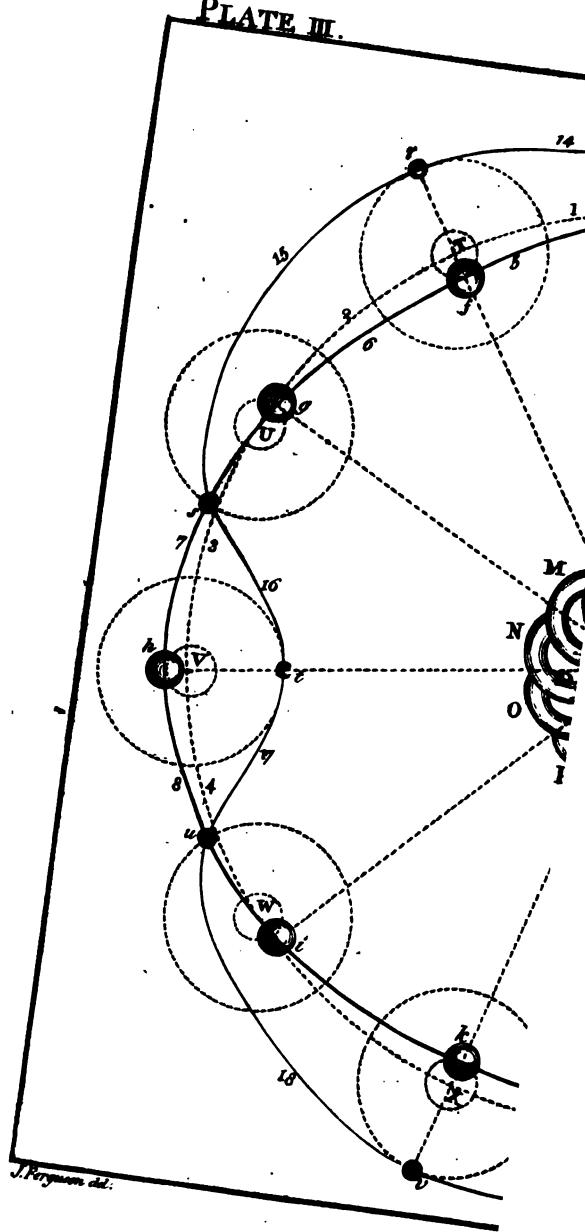
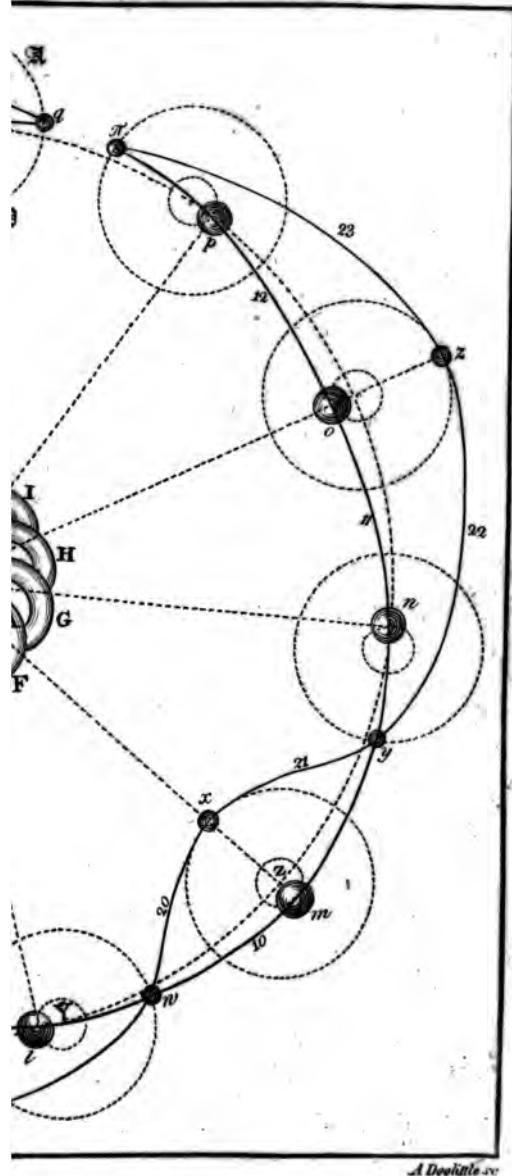


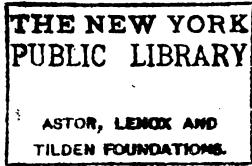
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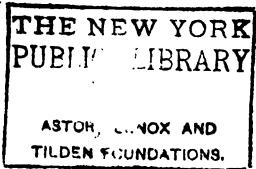


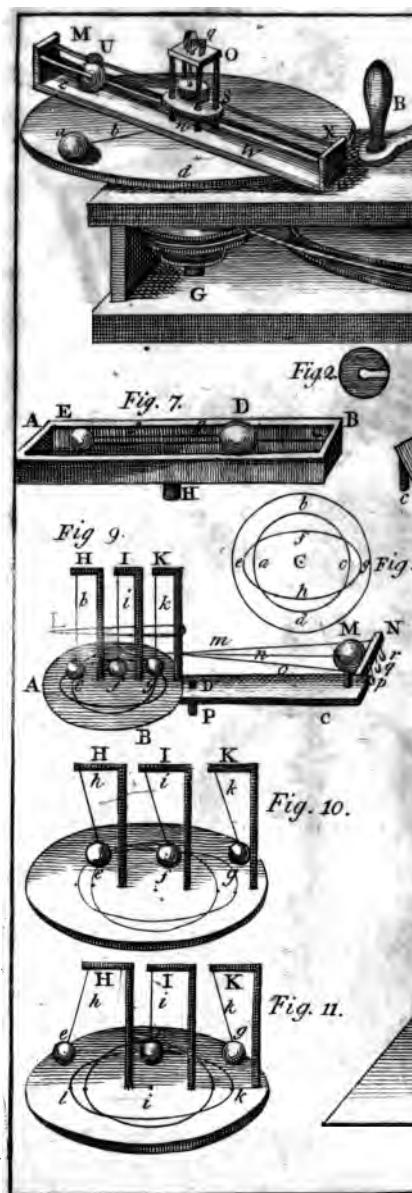
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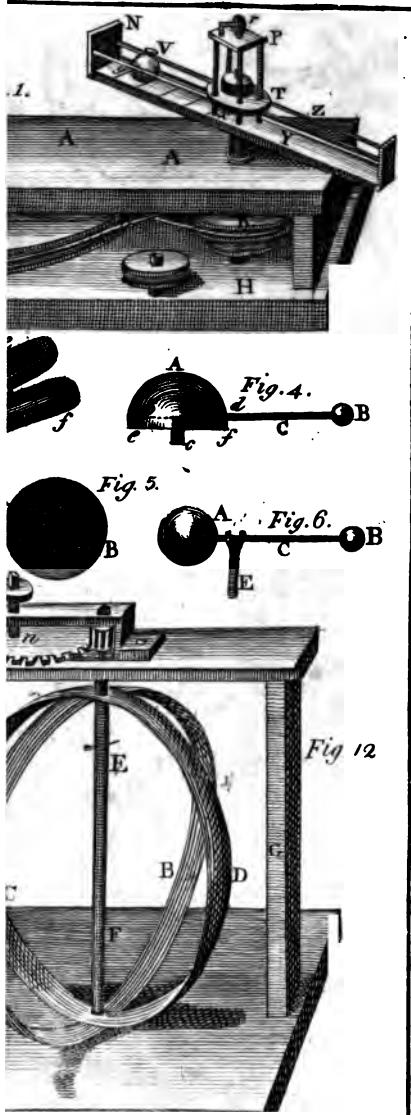
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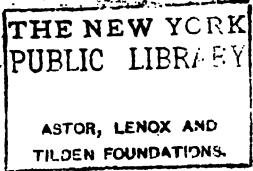






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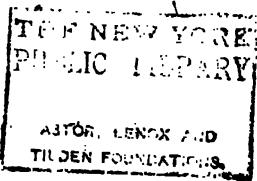
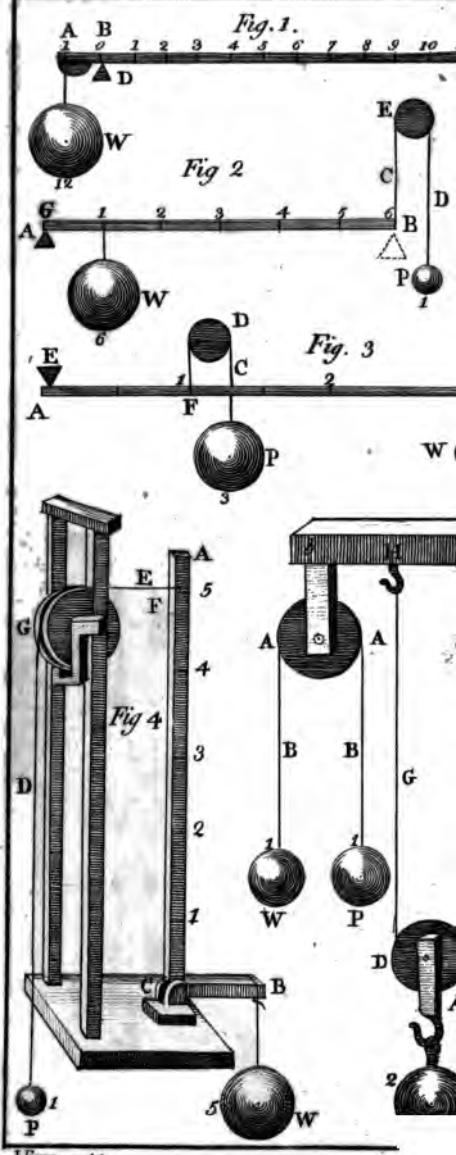


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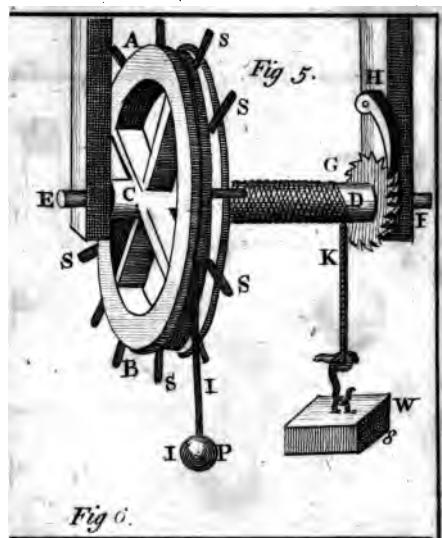
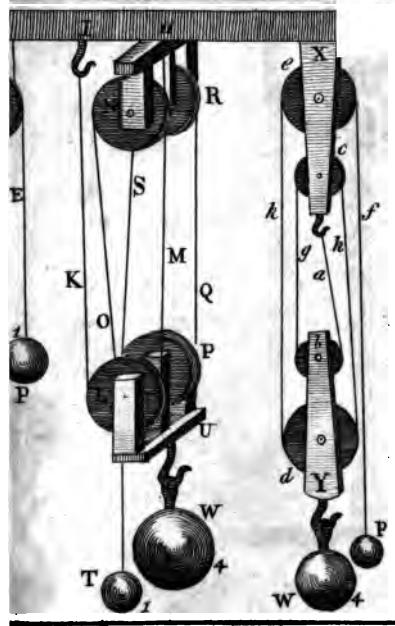
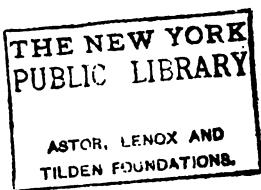


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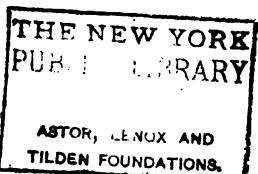
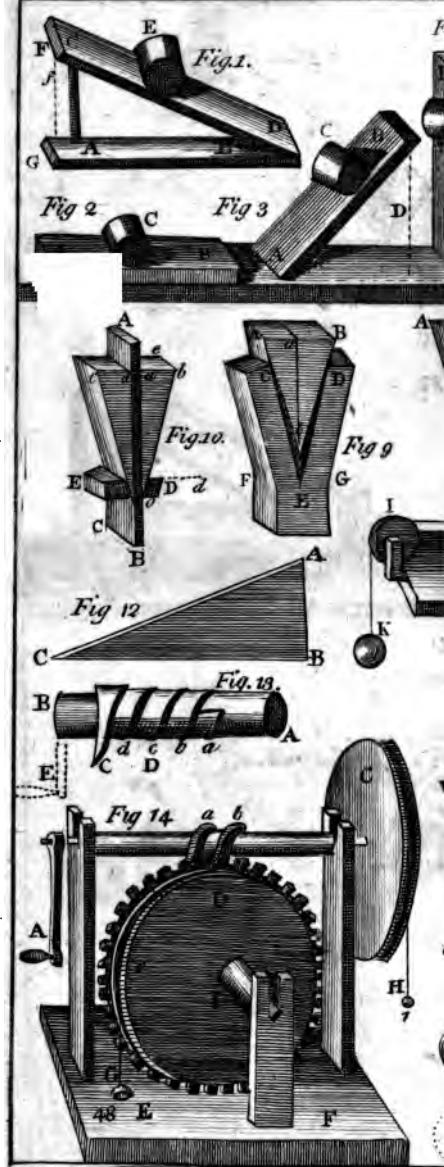
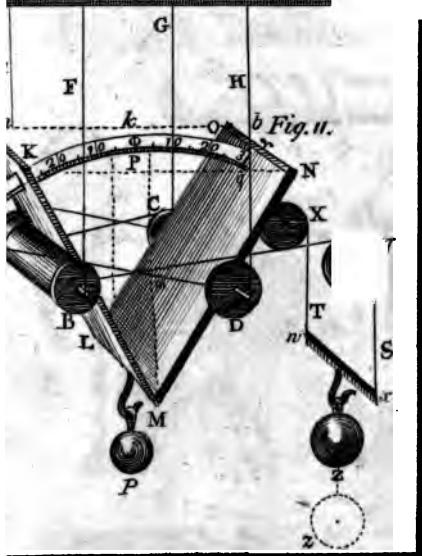
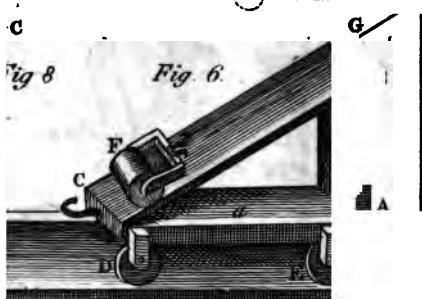
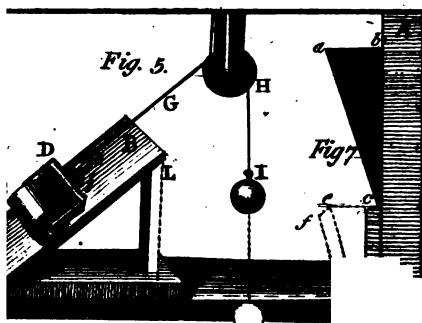
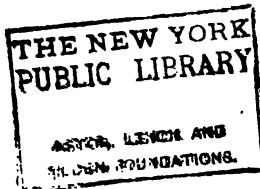


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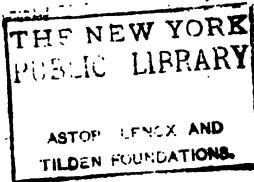
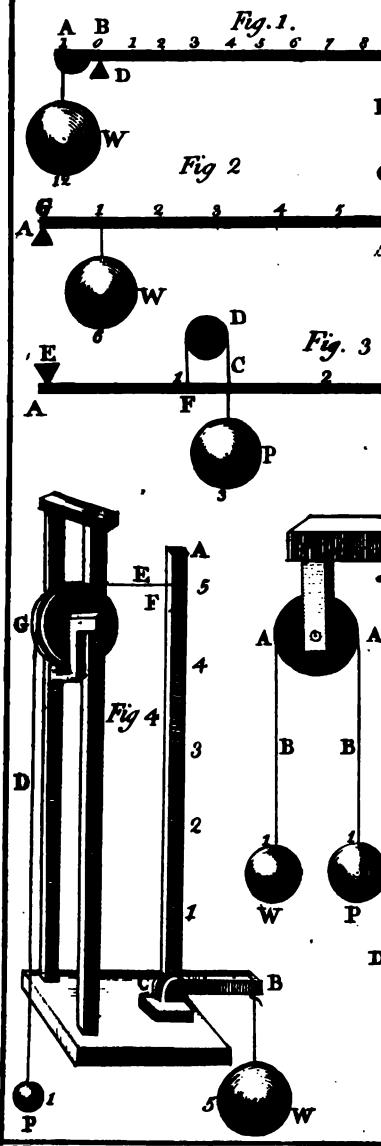


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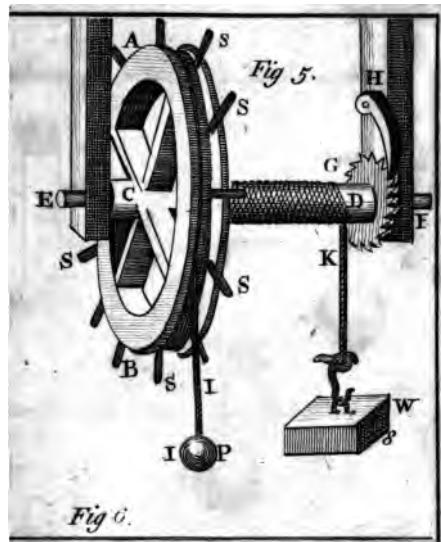
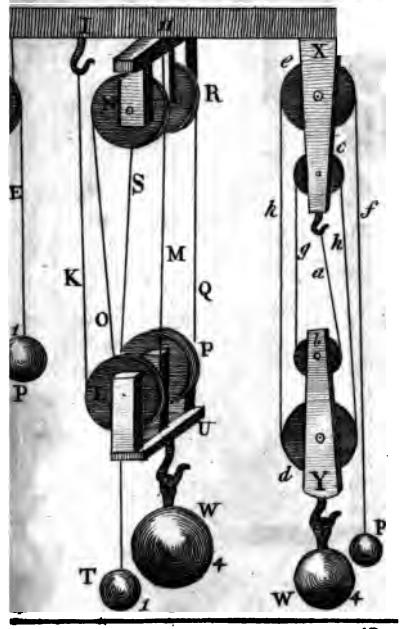
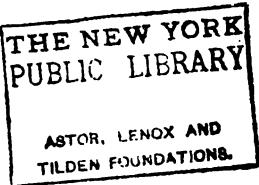


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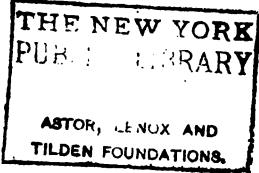
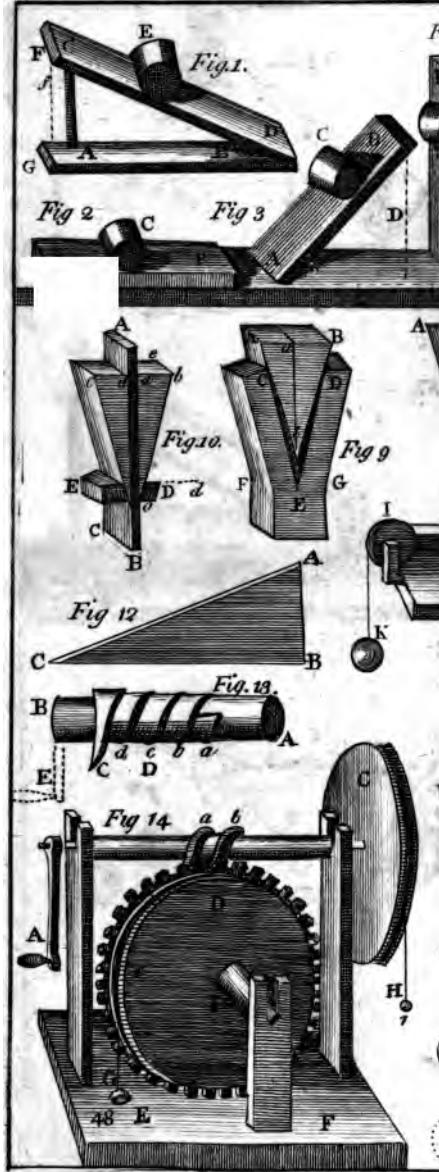


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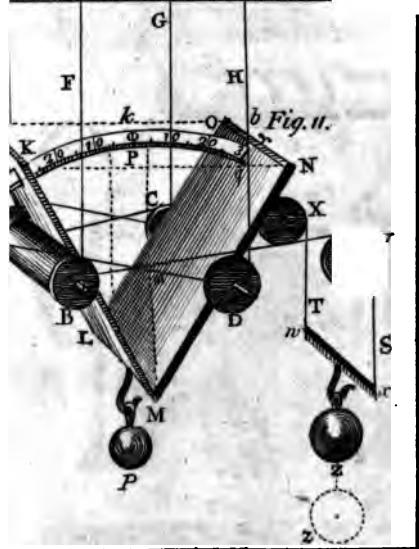
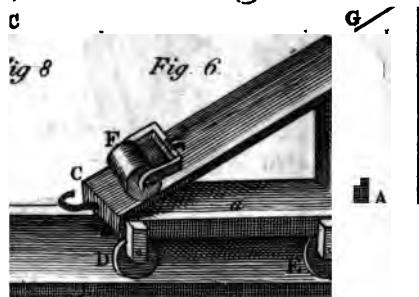
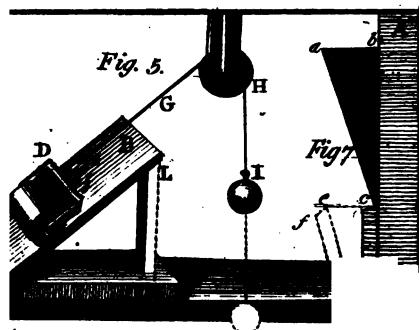
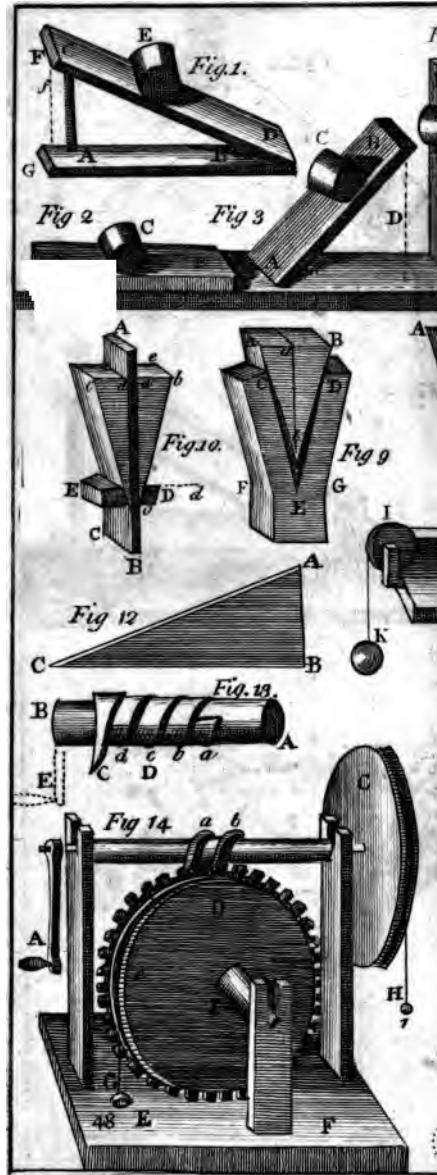
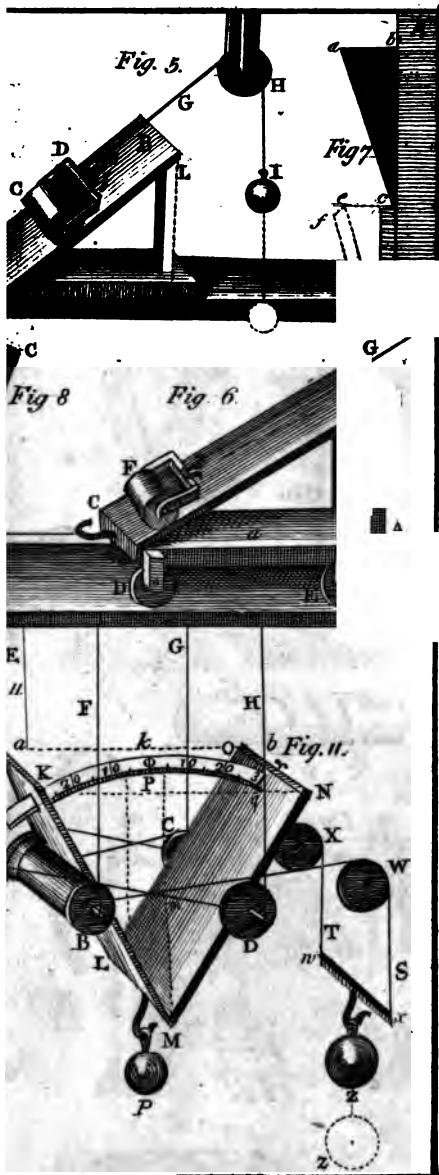
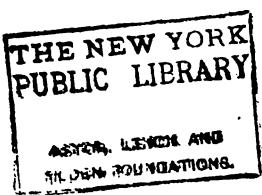


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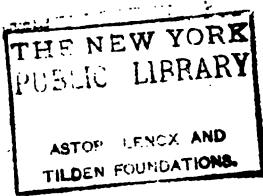
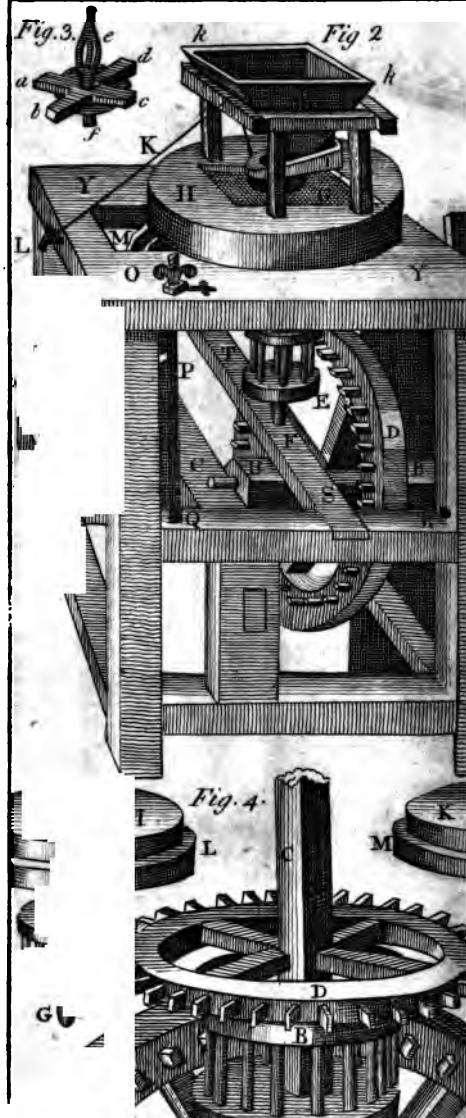


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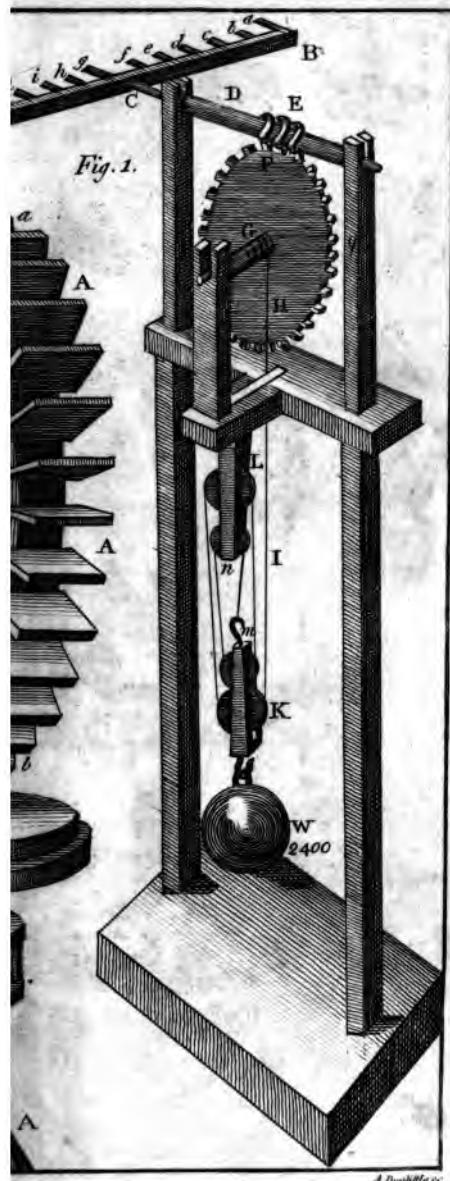
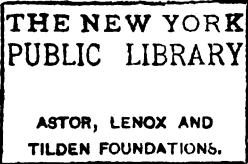


Fig. 1.

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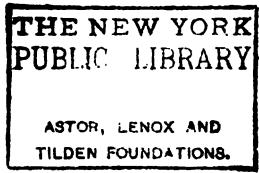


PLATE. VIII.

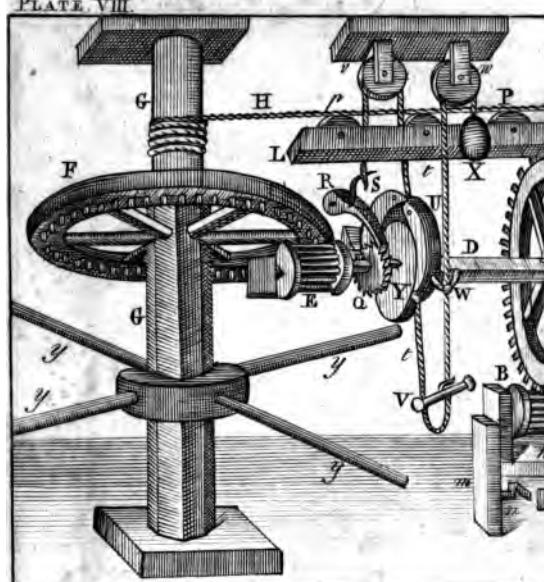
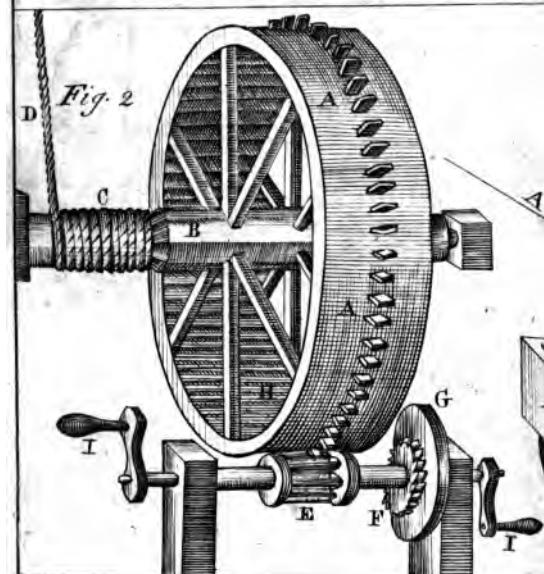
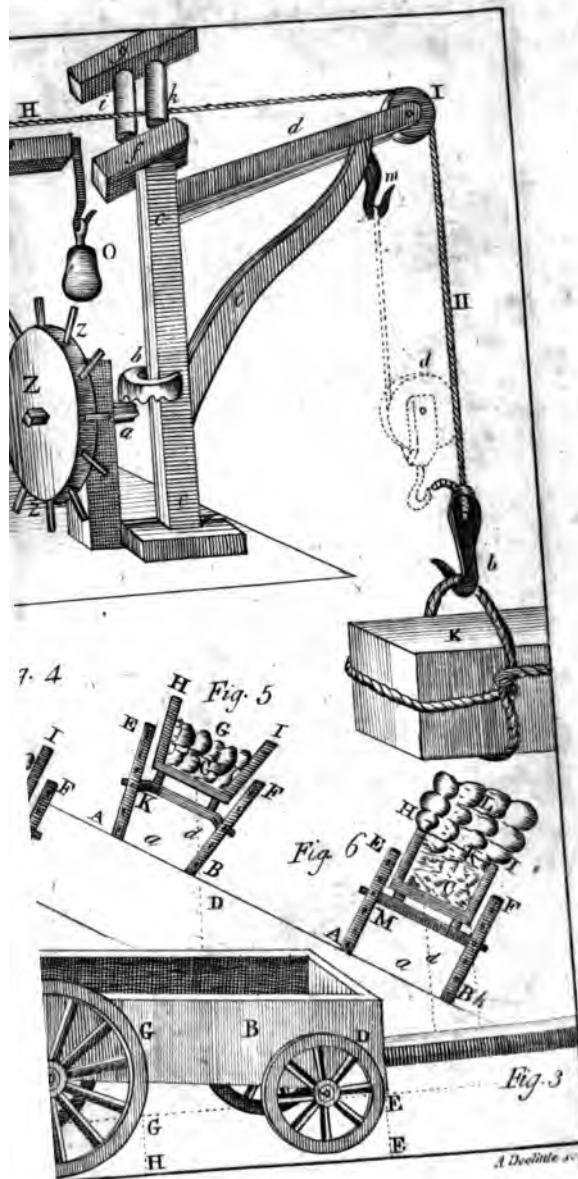


Fig. 2



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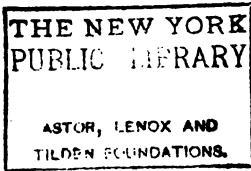
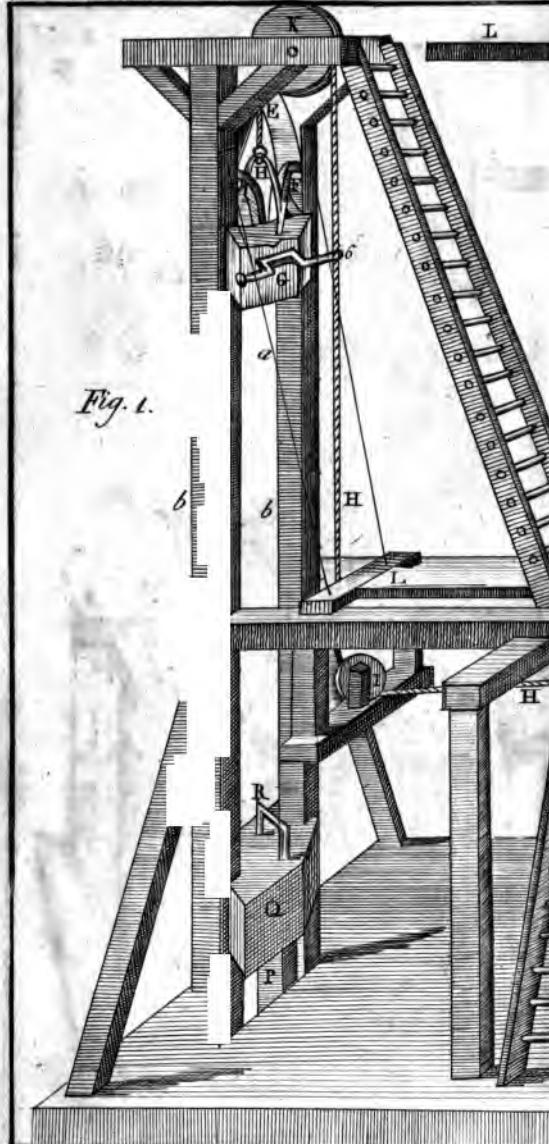


PLATE IX.



J. Freyman del.

*A Section of the great Wheel
Drum and Shaft &c.*

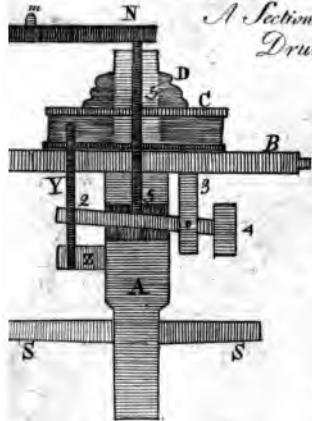
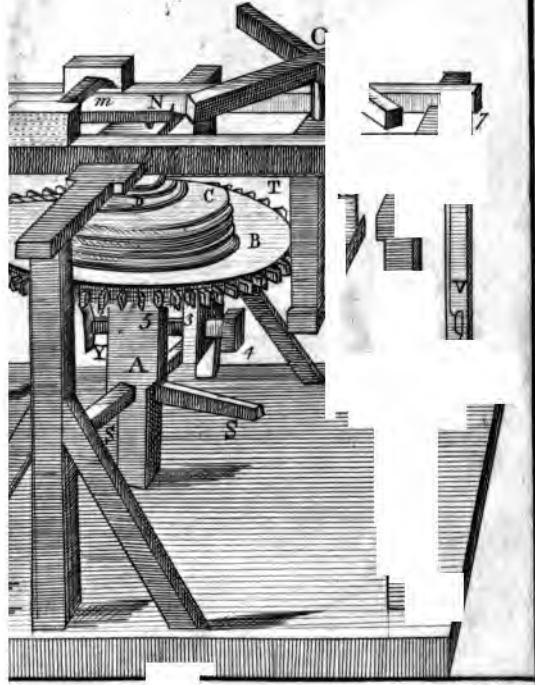


Fig. 3.



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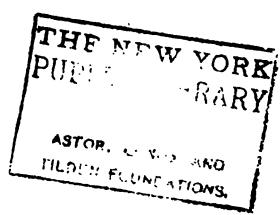
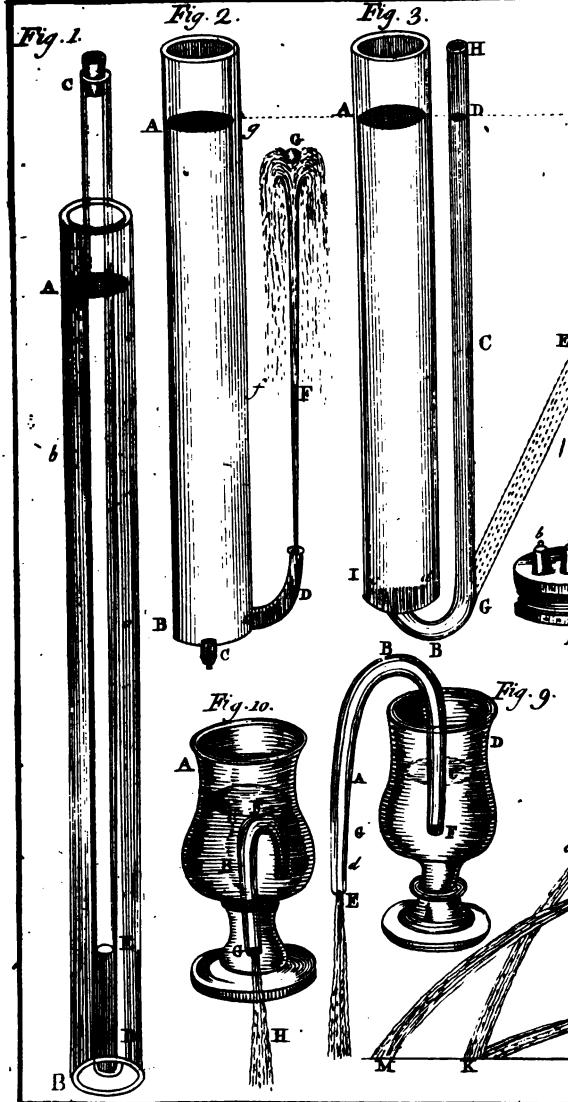
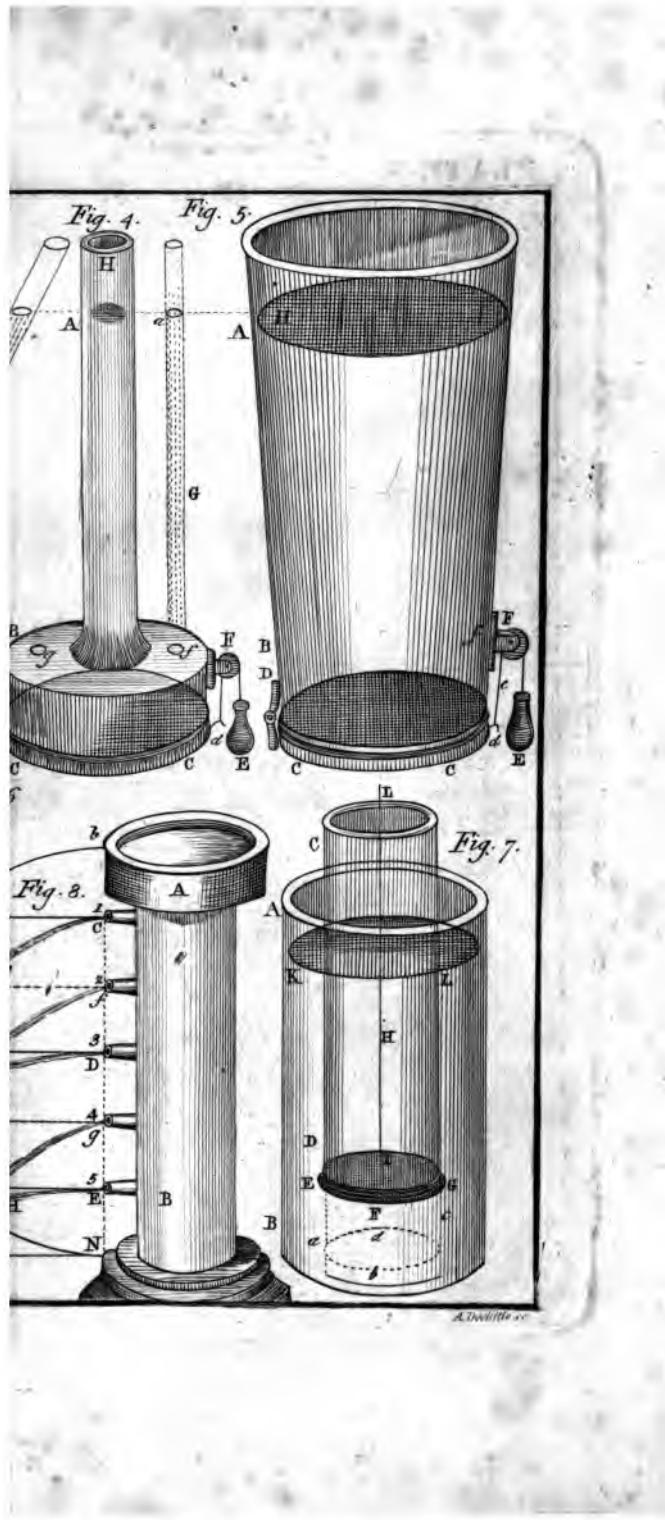
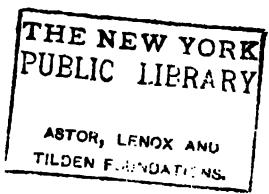


PLATE X.



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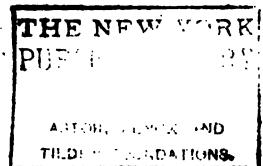


PLATE XI.

Fig. 1.

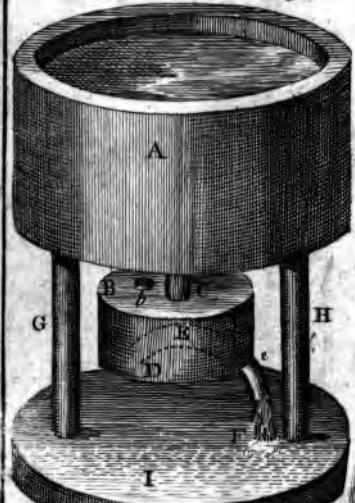
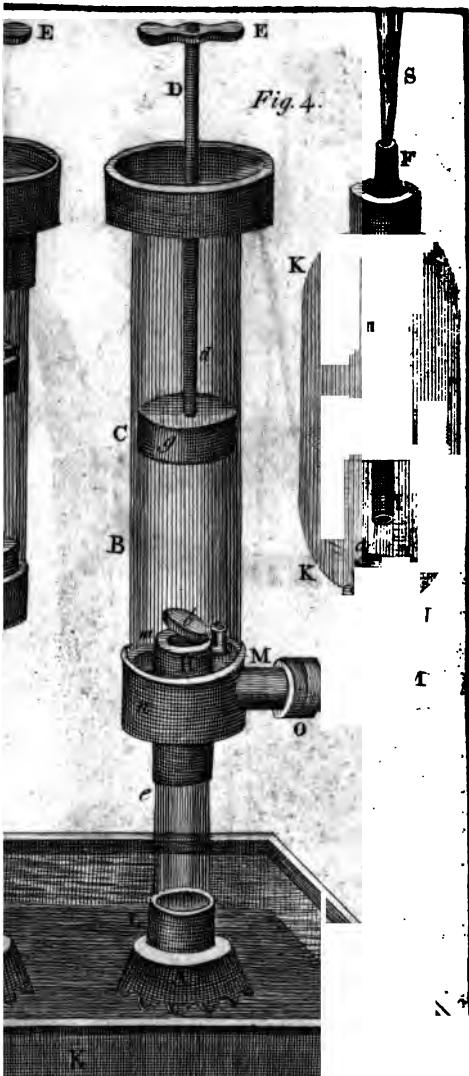


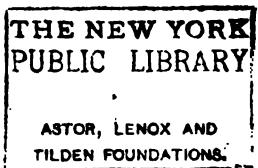
Fig. 2



J. Ferguson del.

Fig. 4.





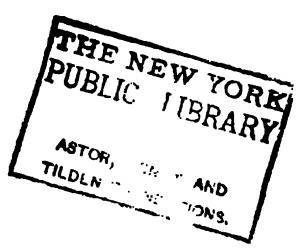
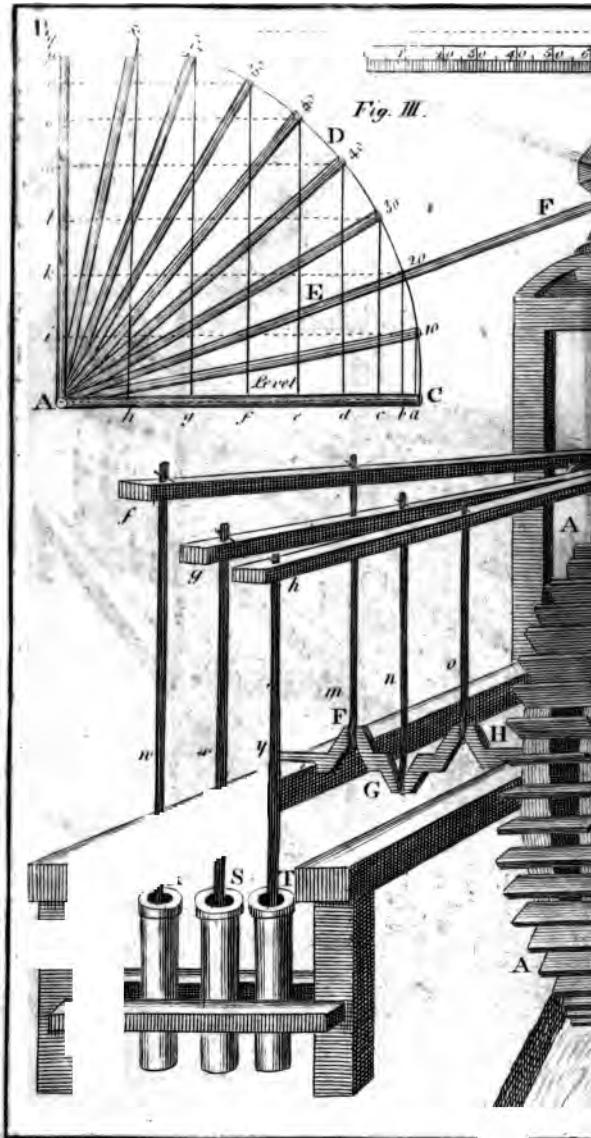
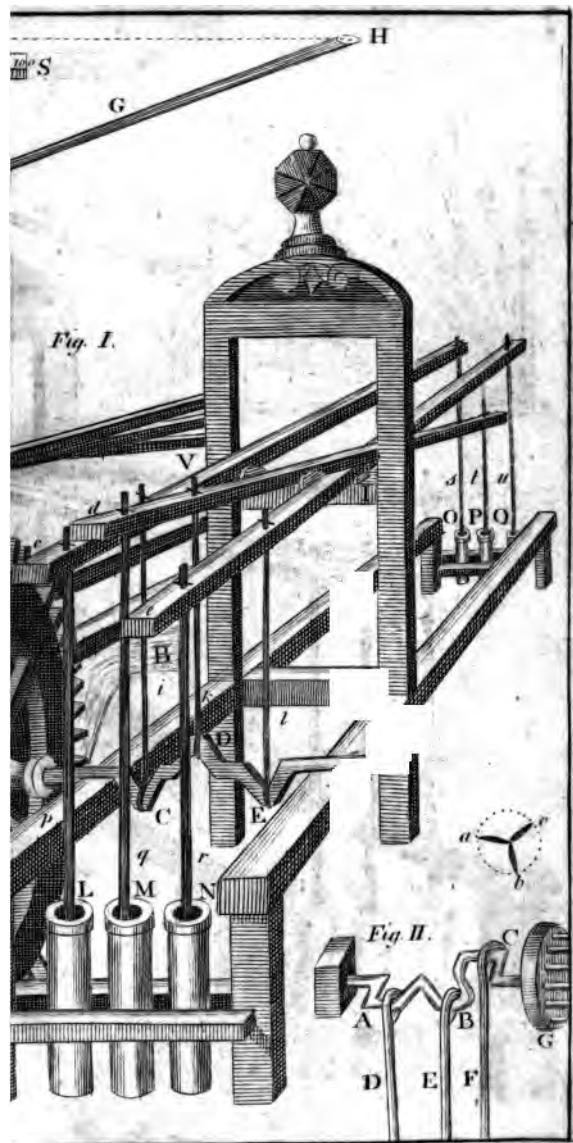
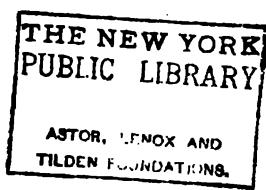


PLATE XII.







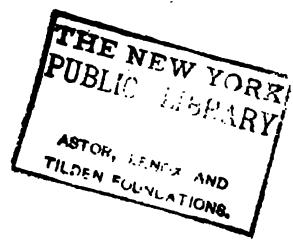
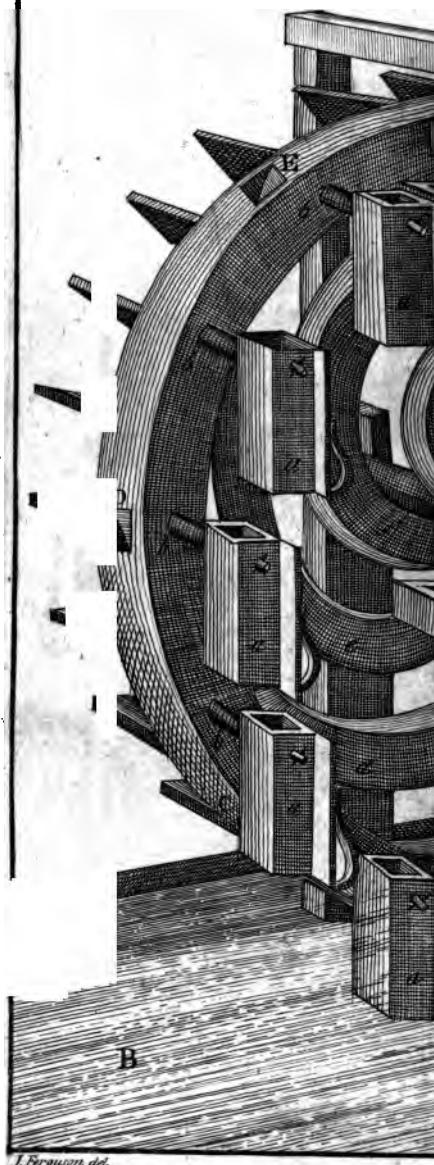
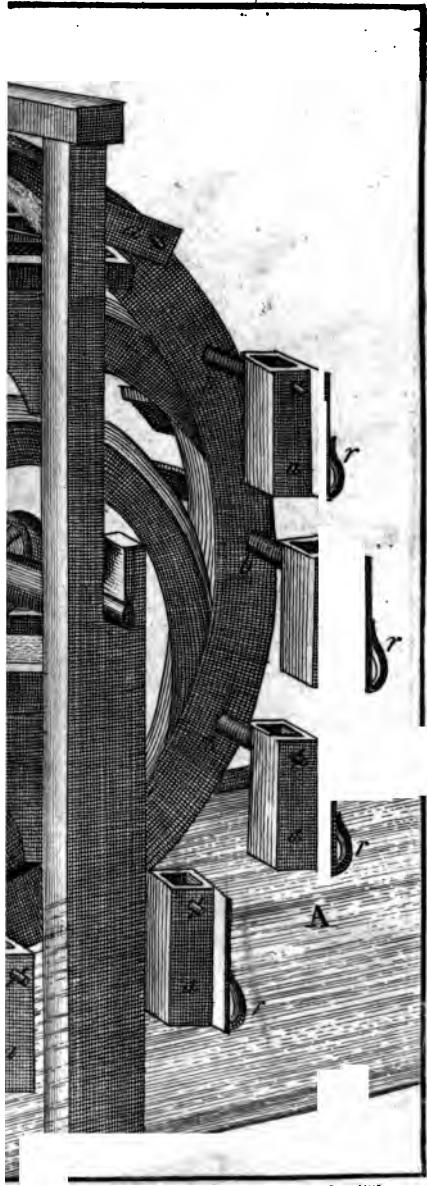
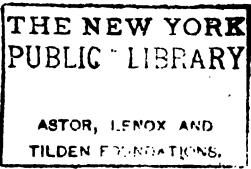


PLATE XIII.





A Duplicite sc.



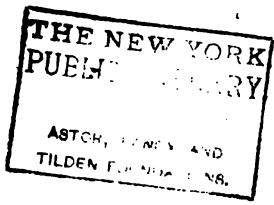
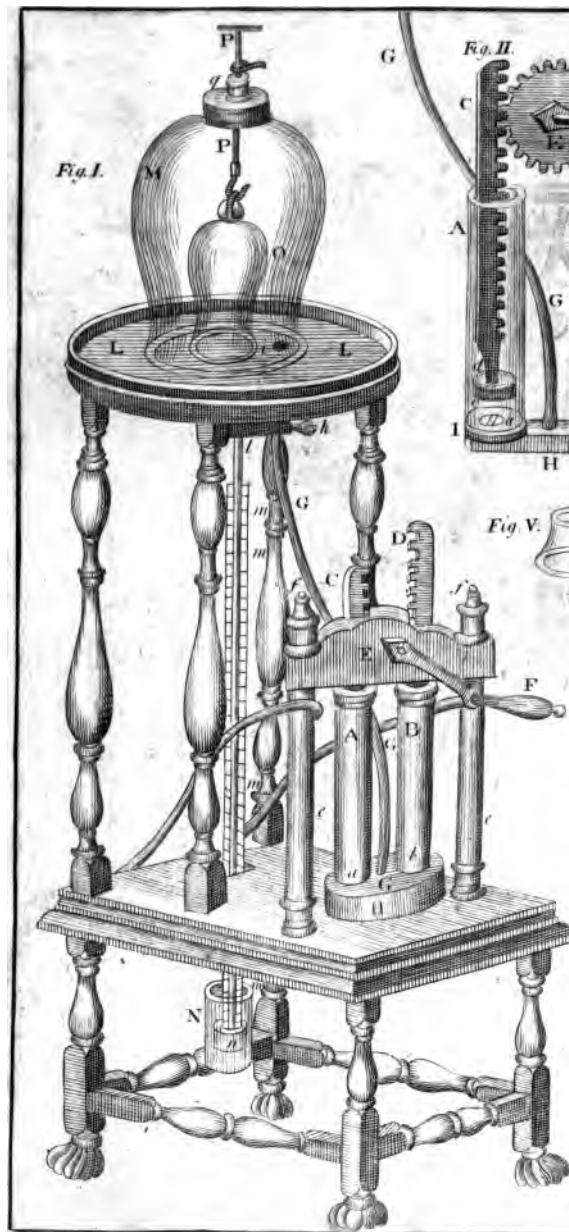
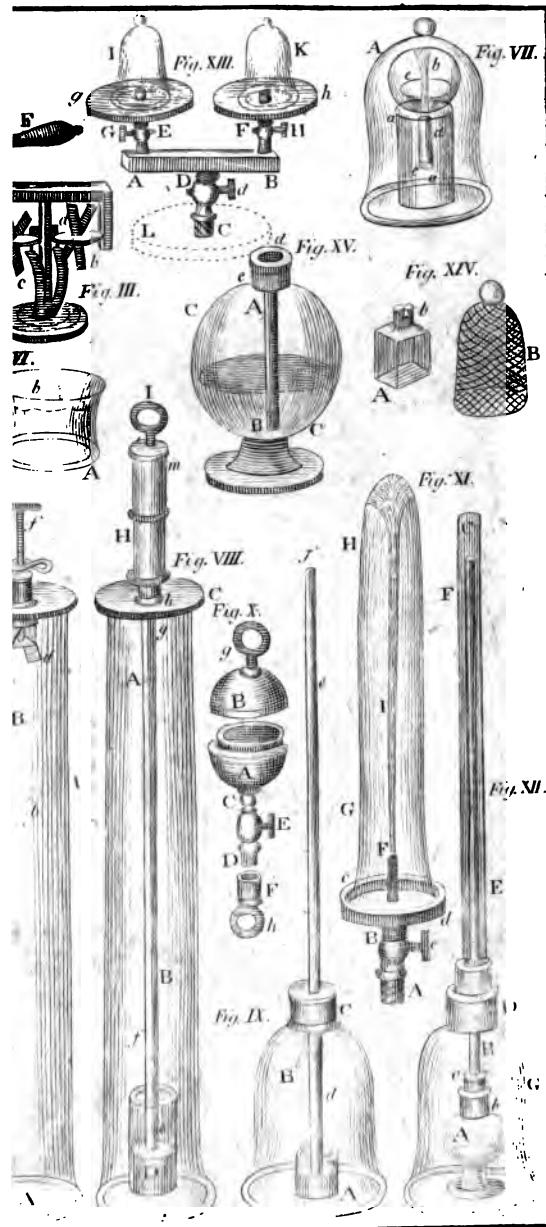
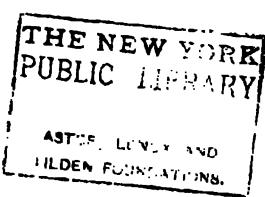


PLATE. XIV.







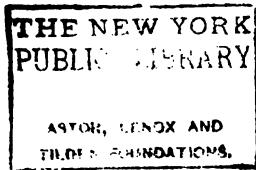
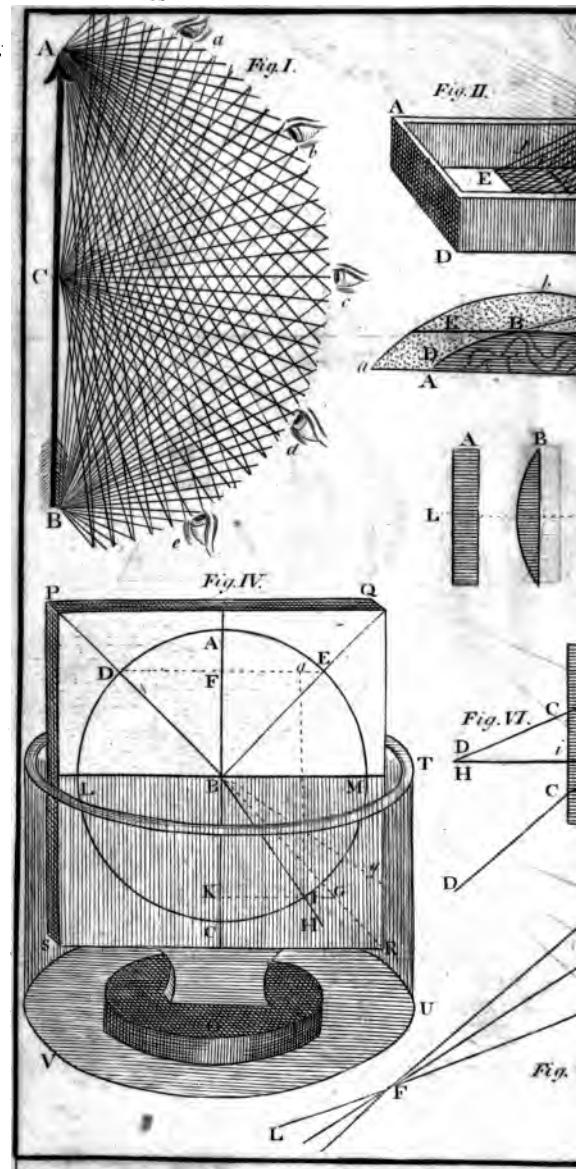
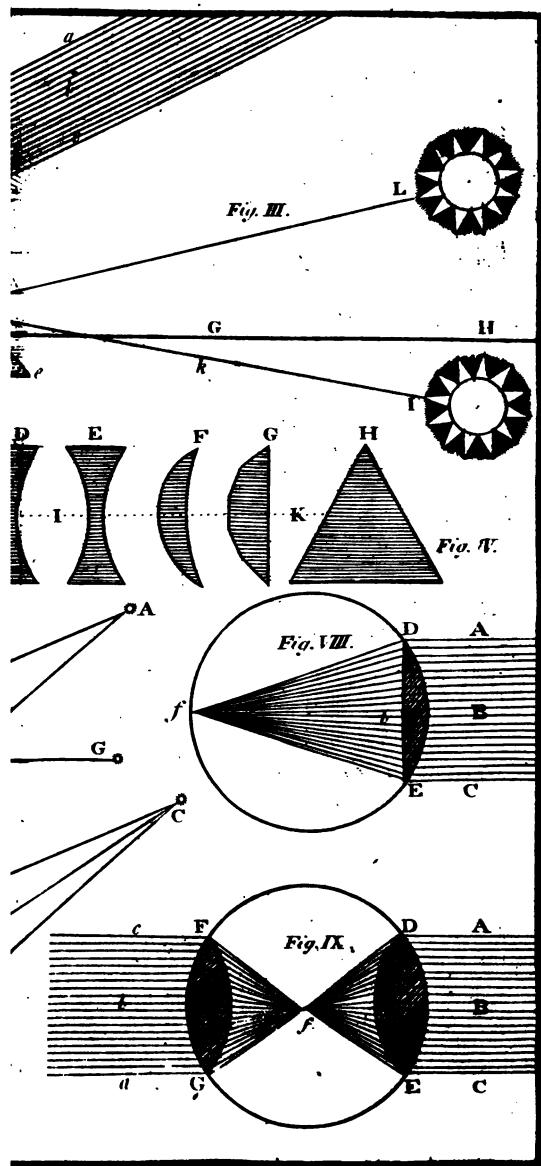
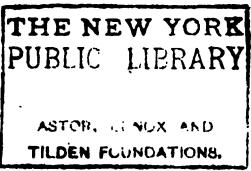


PLATE. XV.







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ASTOR, LENOX AND
TROW Foundations.

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**ASTOR, LENOX AND
TILDEN FOUNDATIONS.**

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TROW Foundations.

PLATE XVI.

Fig. I.

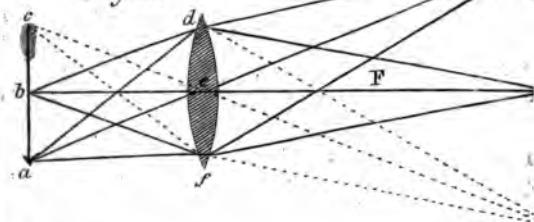


Fig. III.

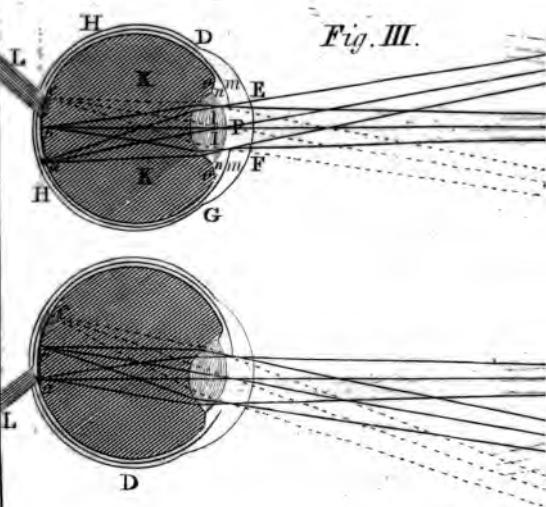
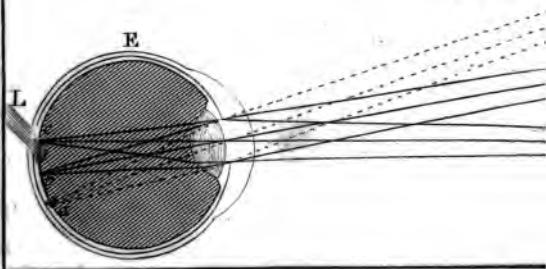
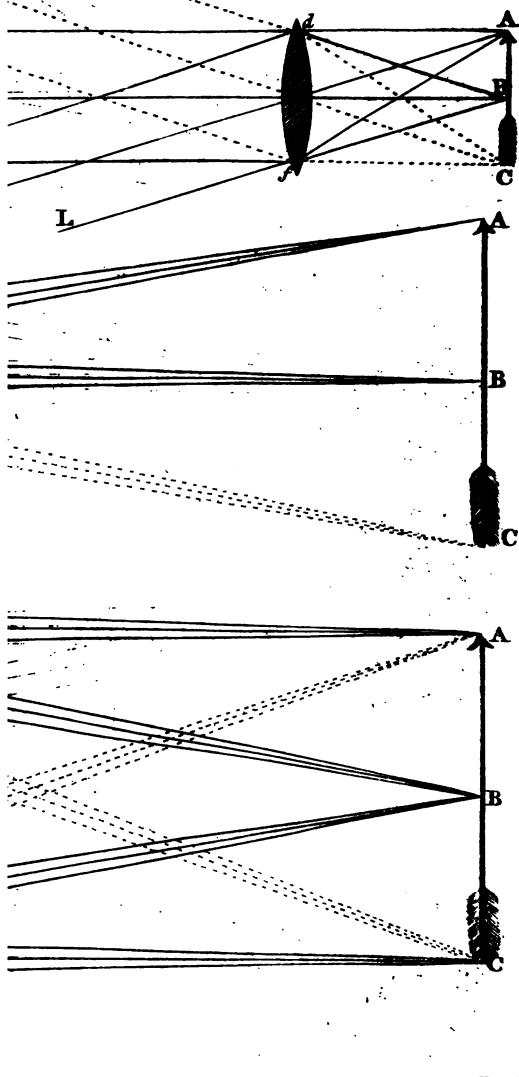


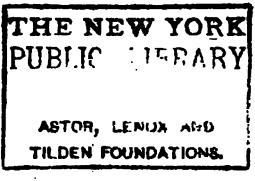
Fig. IV.



I

Fig. II.

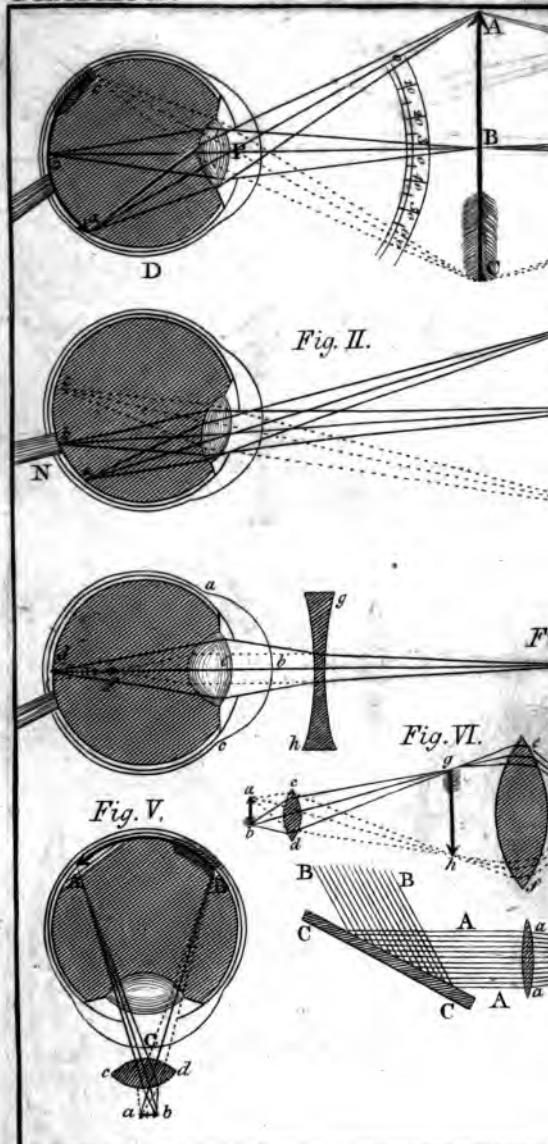


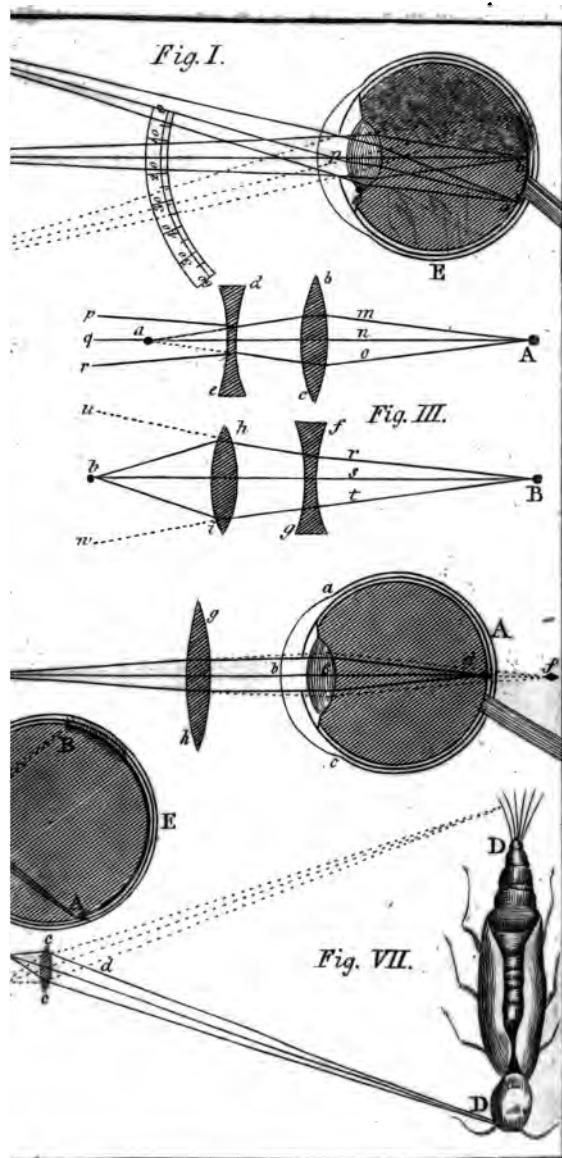


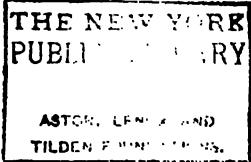
THE NEW YORK
PUBLIC LIBRARY

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THEODORE W. HARRIS.

PLATE XVII.







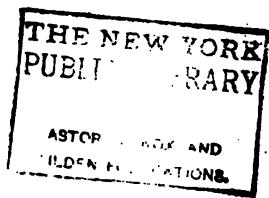


PLATE XVIII.

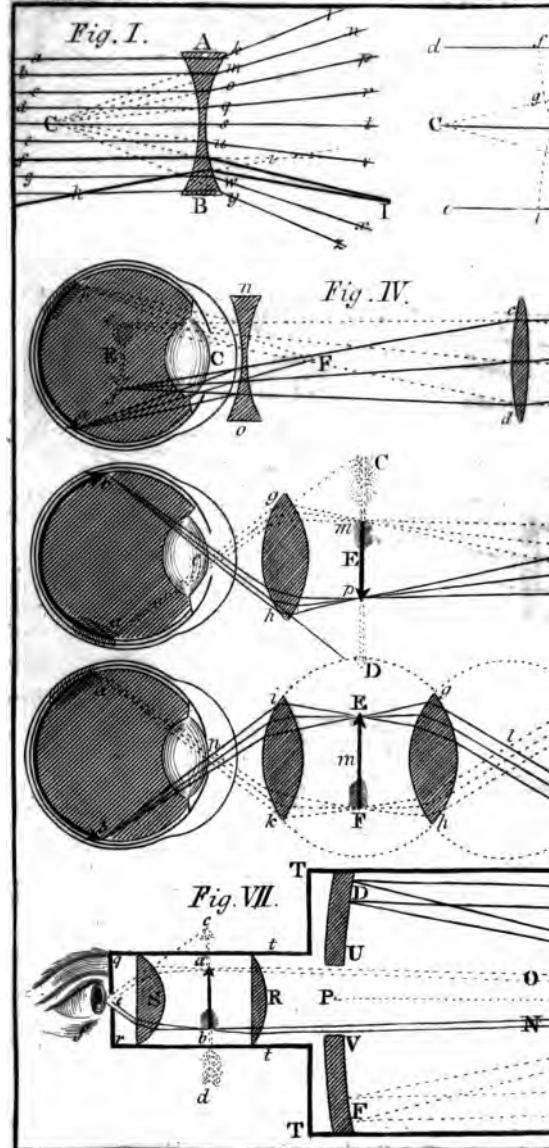


Fig. III.

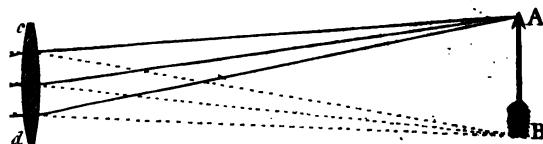
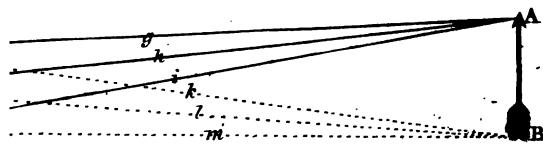
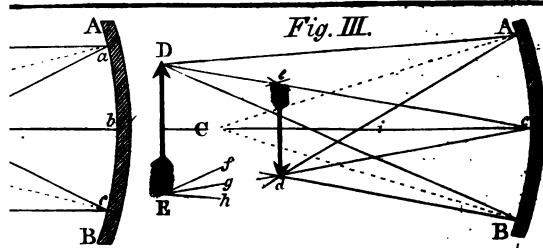
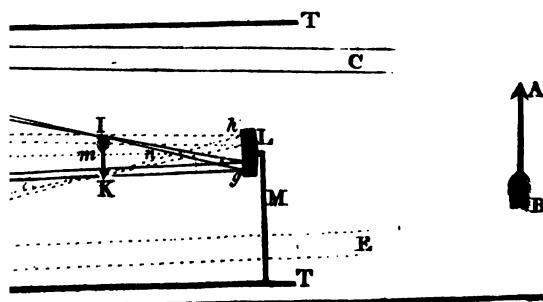
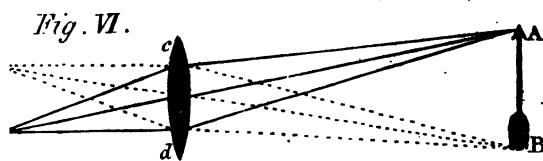
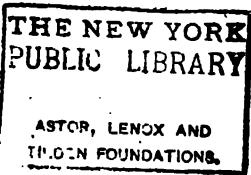
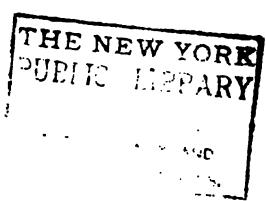
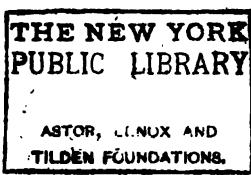


Fig. VI.









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TILDEN FOUNDATIONS.**

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ASTOR, LENOX AND
TROW Foundations.

PLATE XVI.

Fig. I.

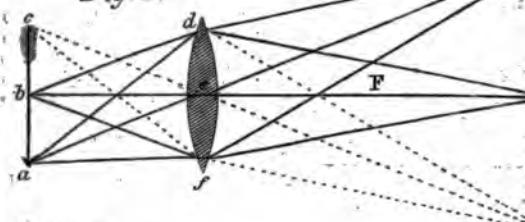


Fig. III.

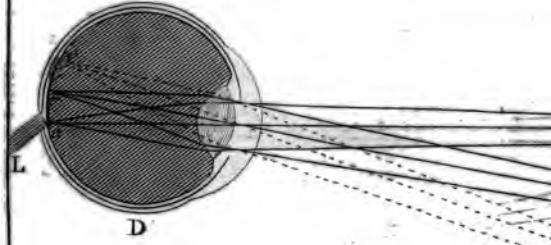
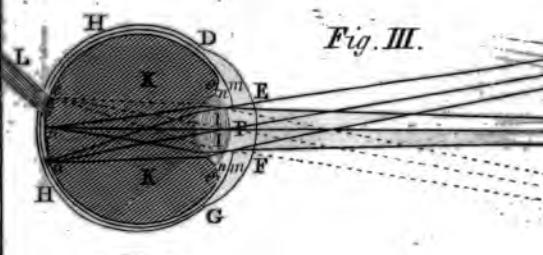


Fig. IV.

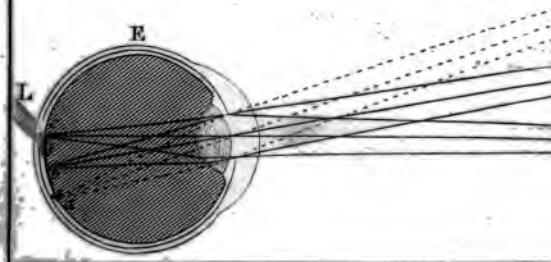
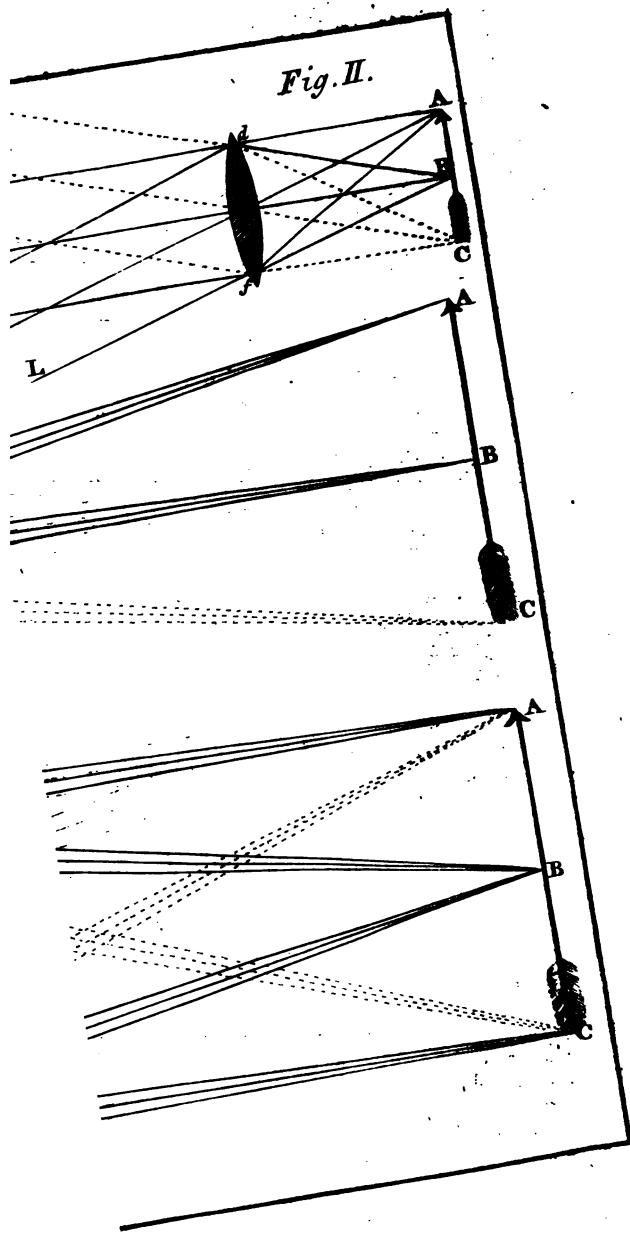
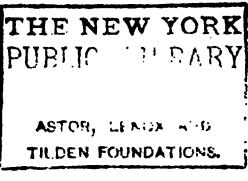


Fig. II.





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ASTOR, LENORE AND
THE NEW YORK LIBRARIES.

PLATE XVII.

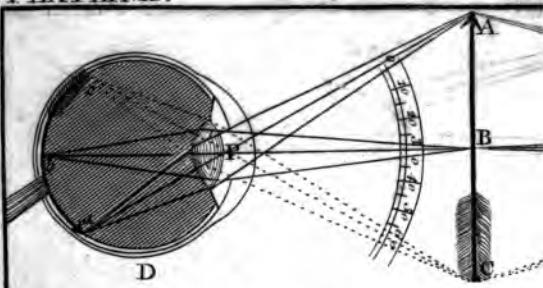


Fig. II.

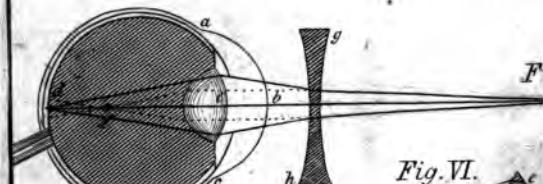
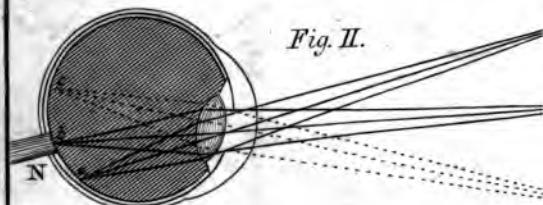


Fig. VI.

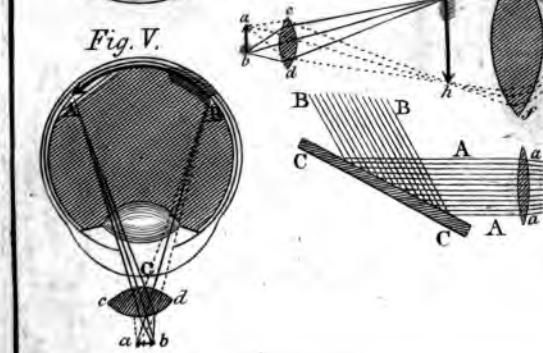
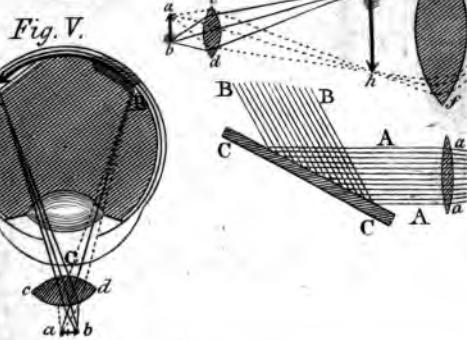
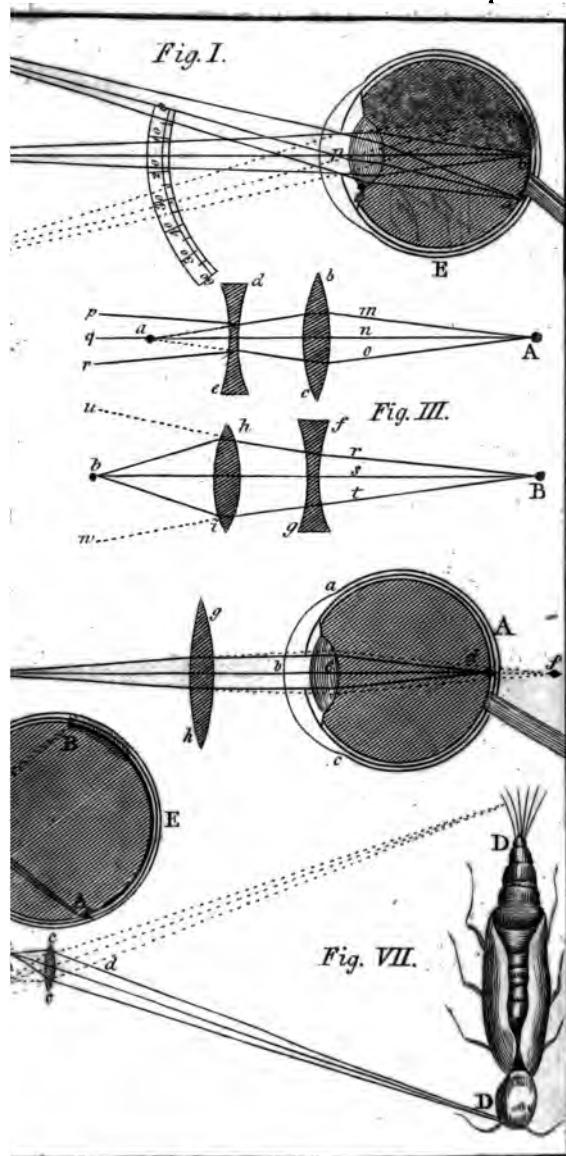
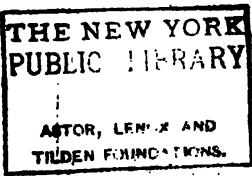


Fig. V.







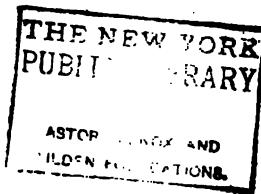


PLATE XVIII.

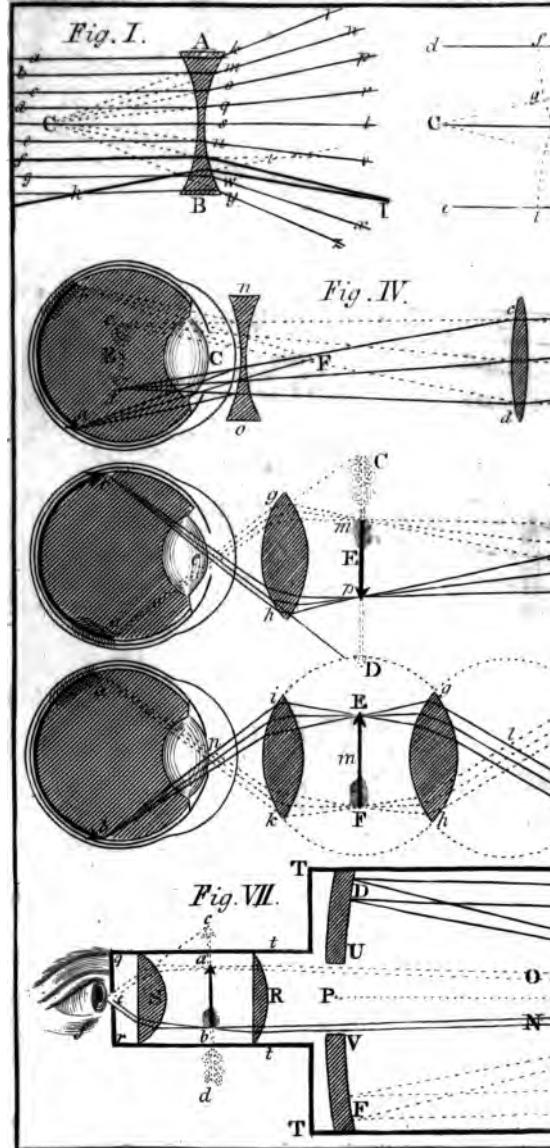


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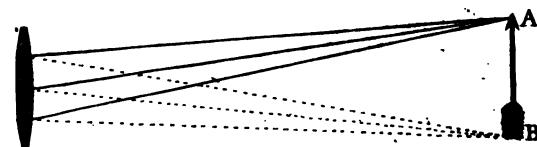
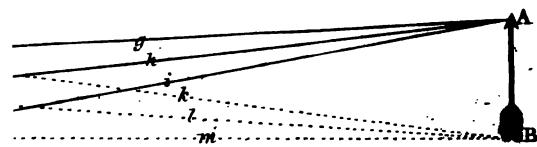
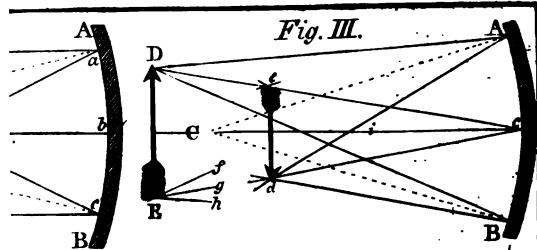
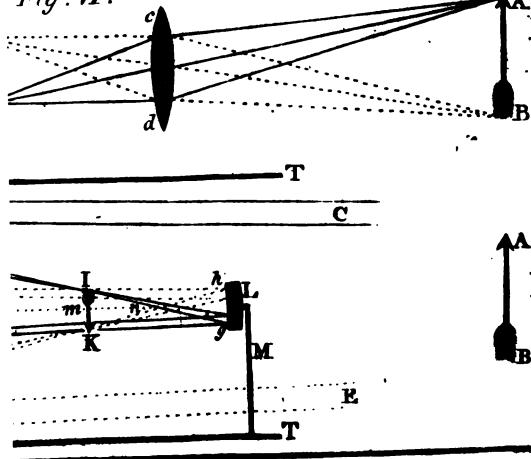
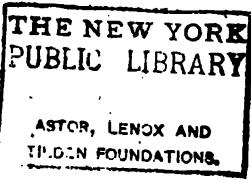


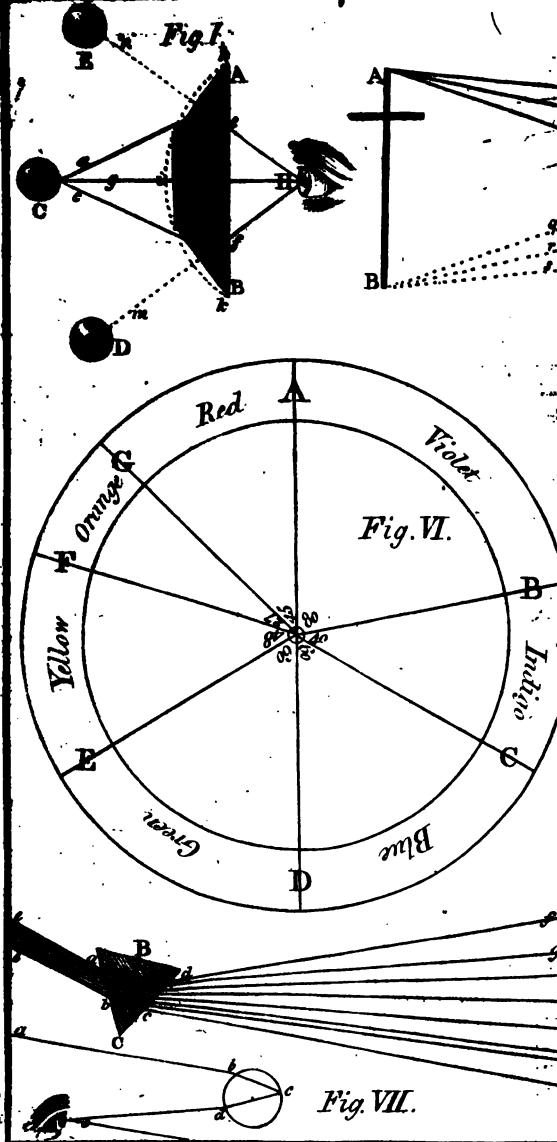
Fig. VI.





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PLATE XIX.



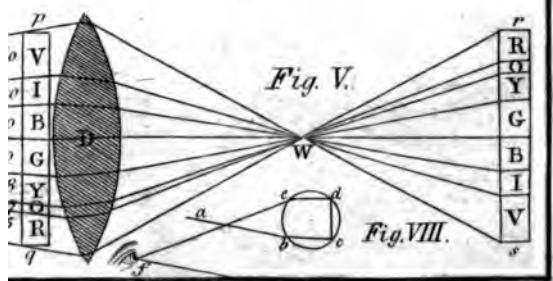
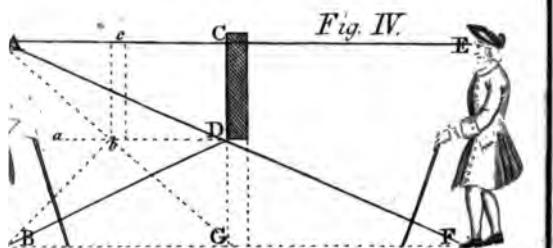
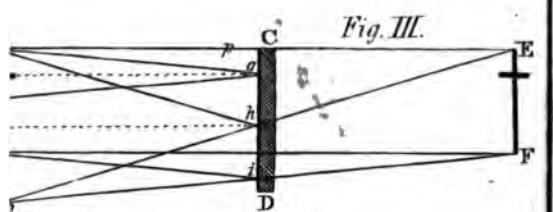
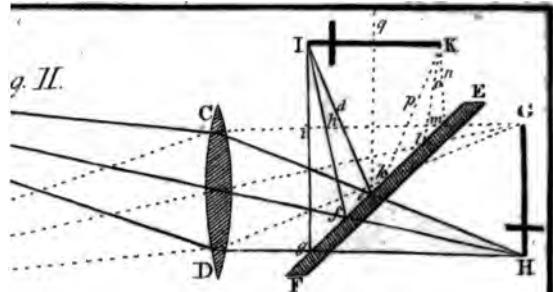
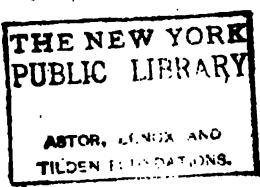


Fig. VIII.



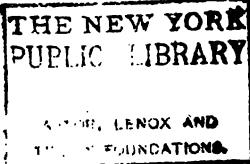


PLATE XX.

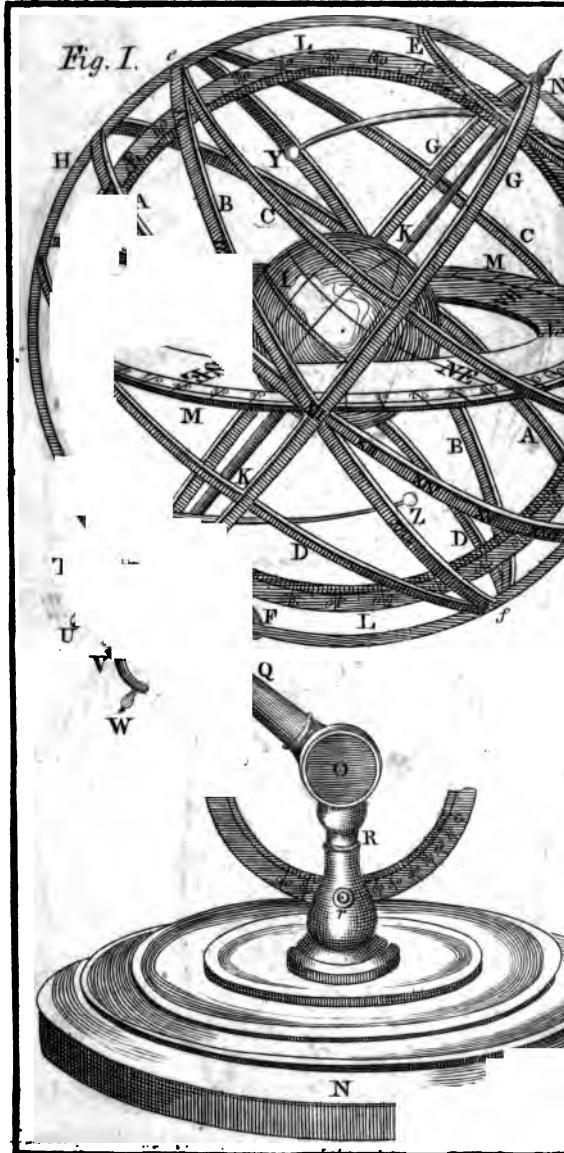


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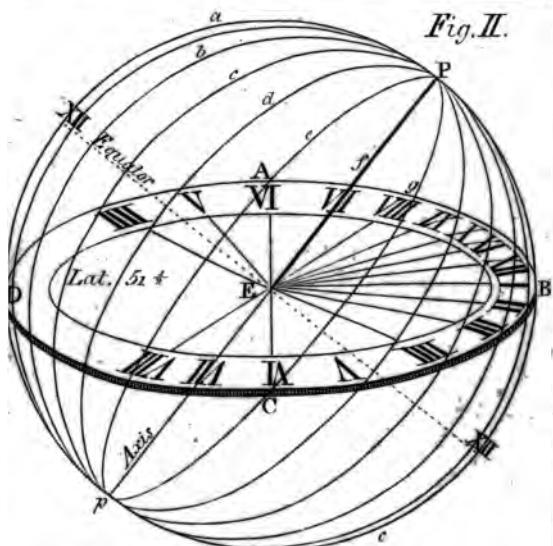
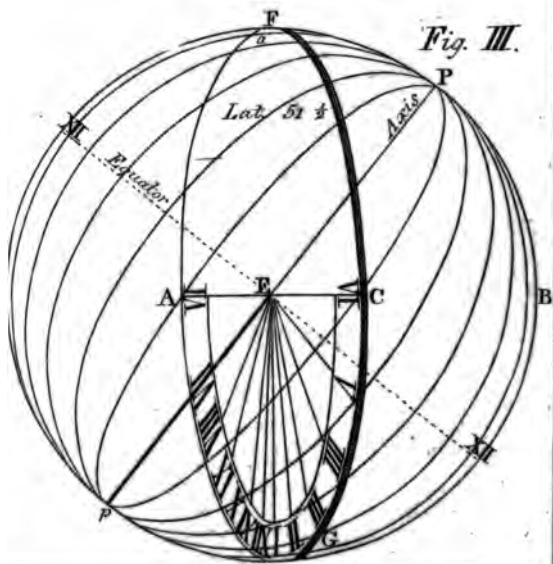


Fig. III.



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LIBRARY
SERIALS
DEPT.

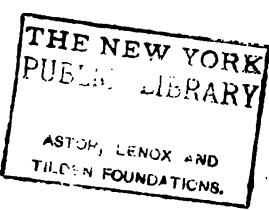


PLATE XXI.

Fig. I.

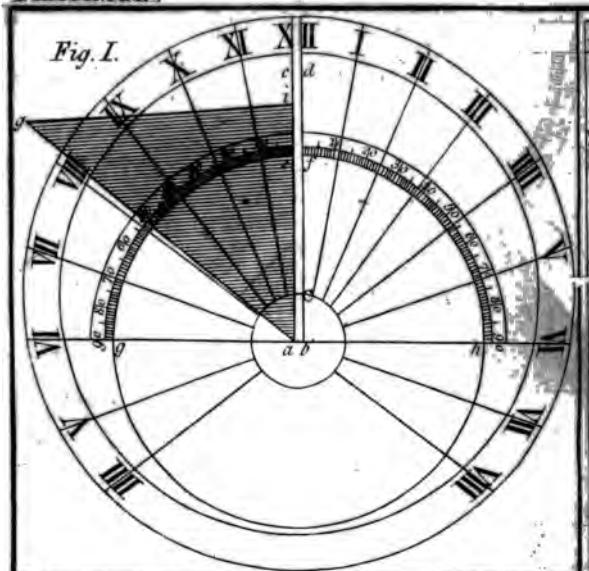


Fig. III.

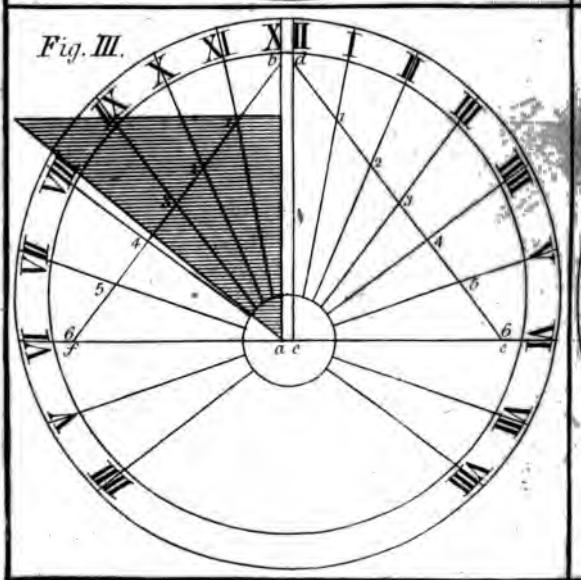


Fig. II.

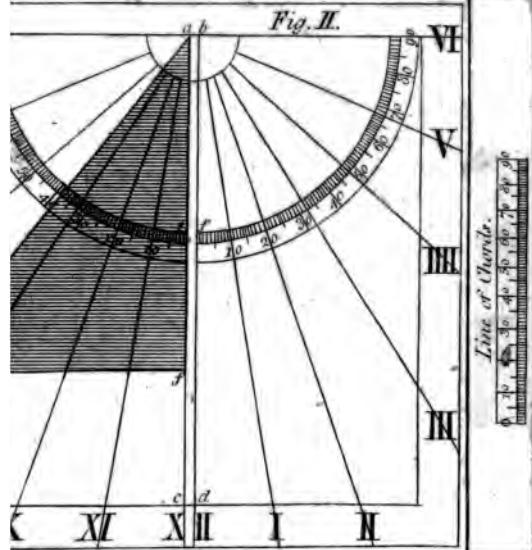
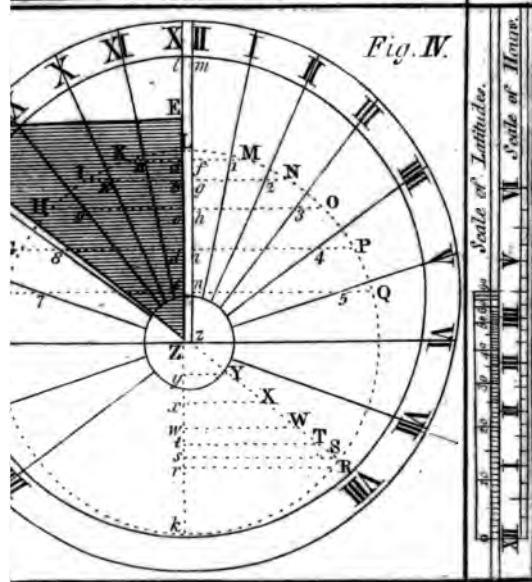
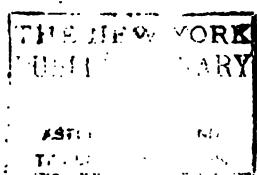


Fig. IV.





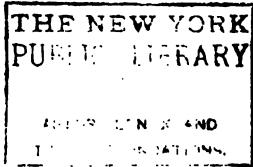
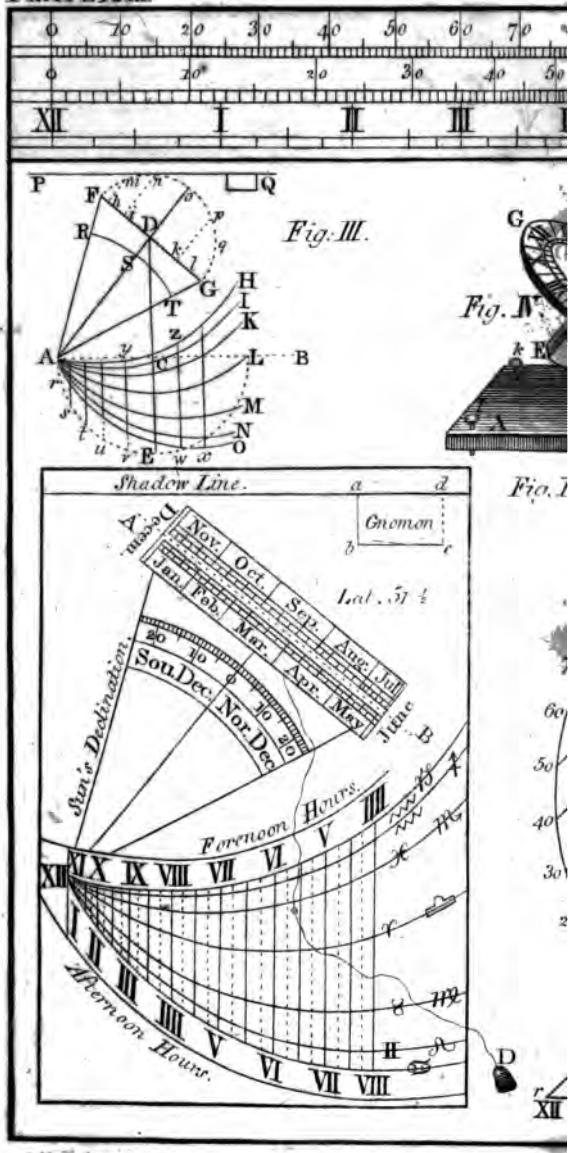


PLATE XXII.

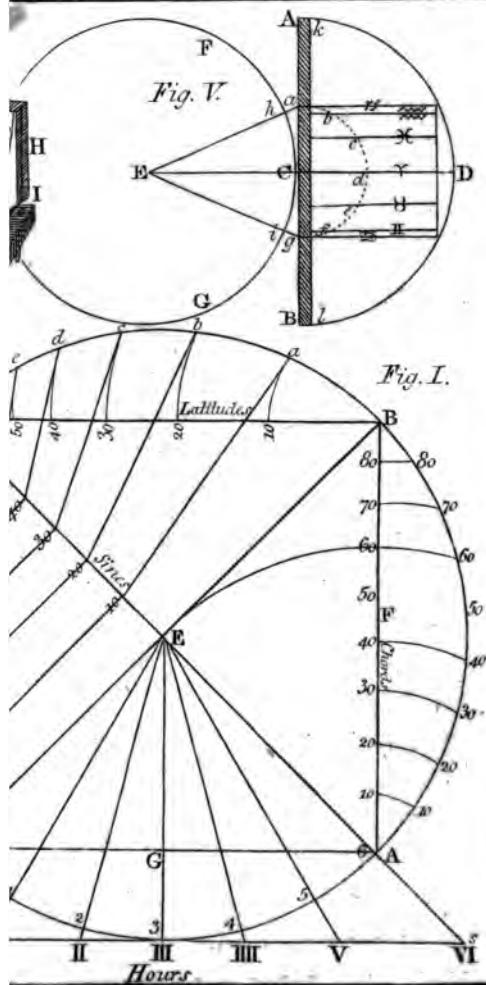


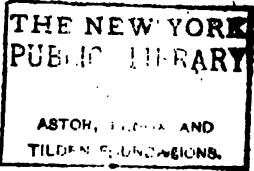
The Line of Chords.

The Line of Latitudes.

VI

The Line of Hours.





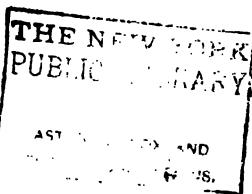


PLATE XXIII.

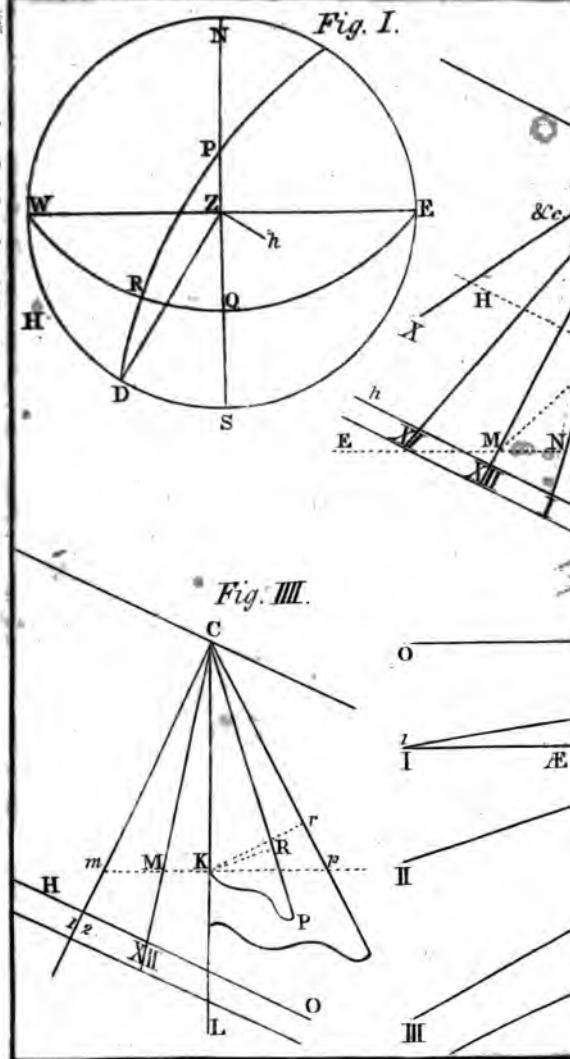


Fig. III.

IV.

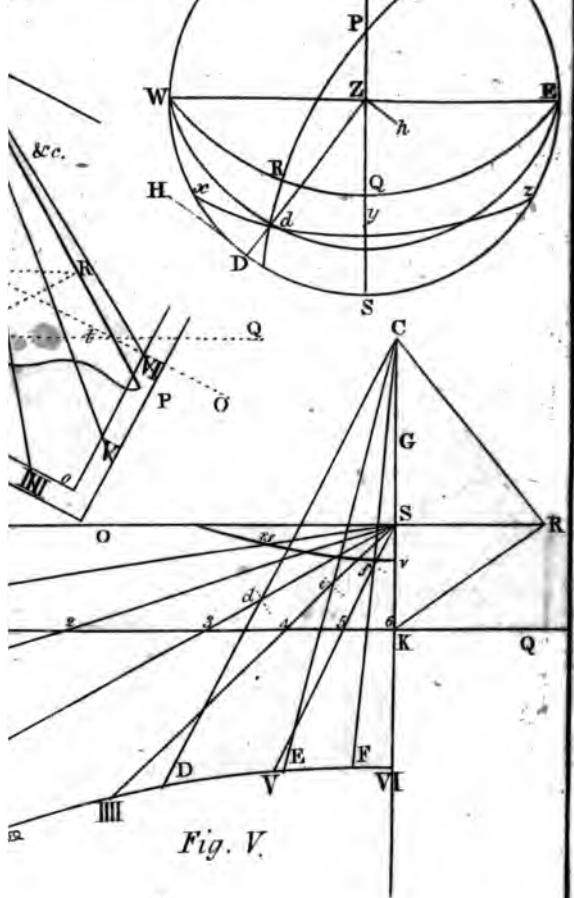
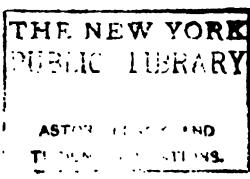


Fig. V.



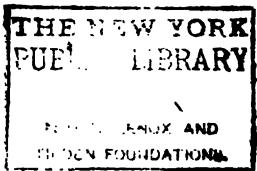
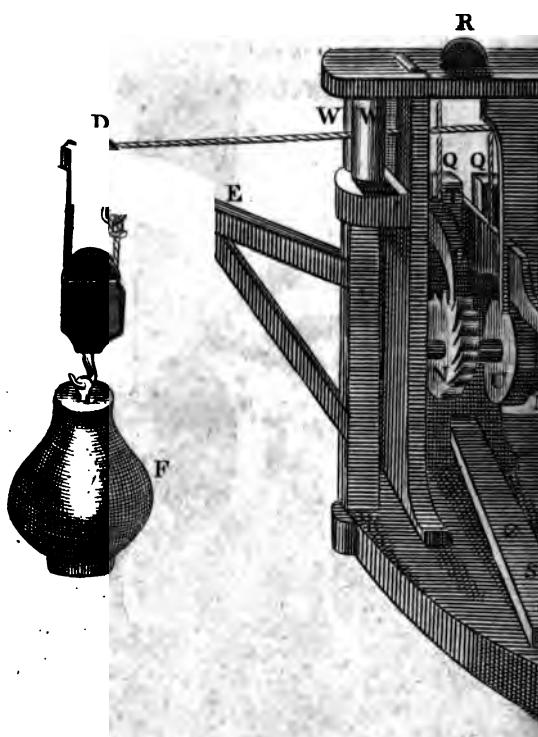
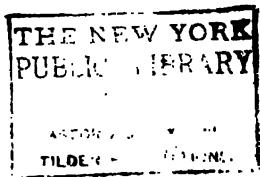


PLATE XXIV.



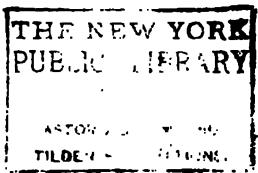
Sup.





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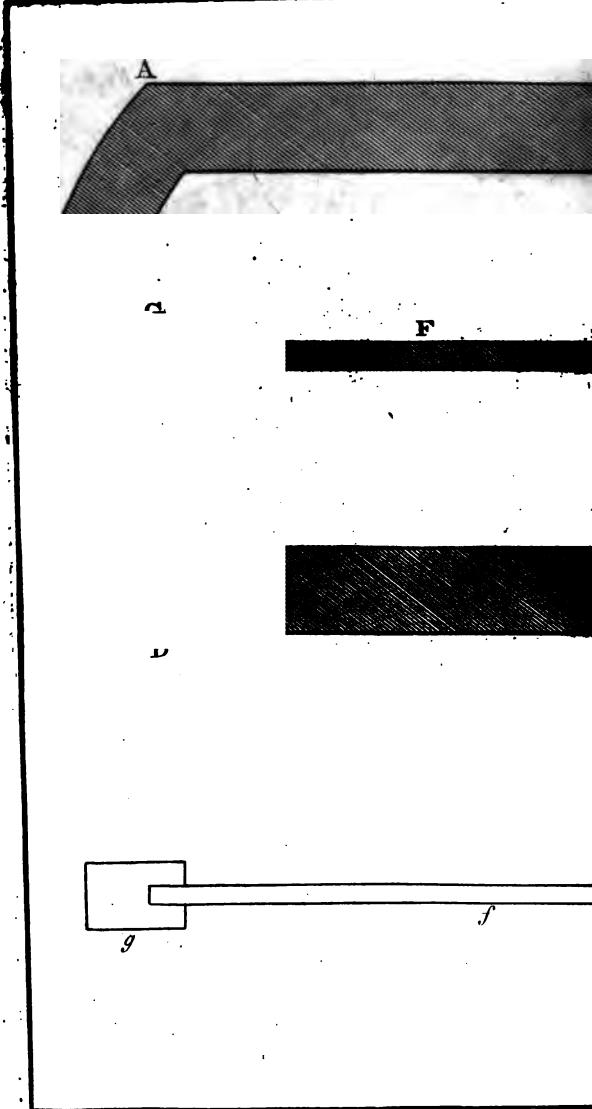
ASTOR, LENOX AND
TILDEN FOUNDATIONS.



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ALLEN, LENOX AND
TROW Foundations.

PLATE XXV.



Sup.

Fig. I.

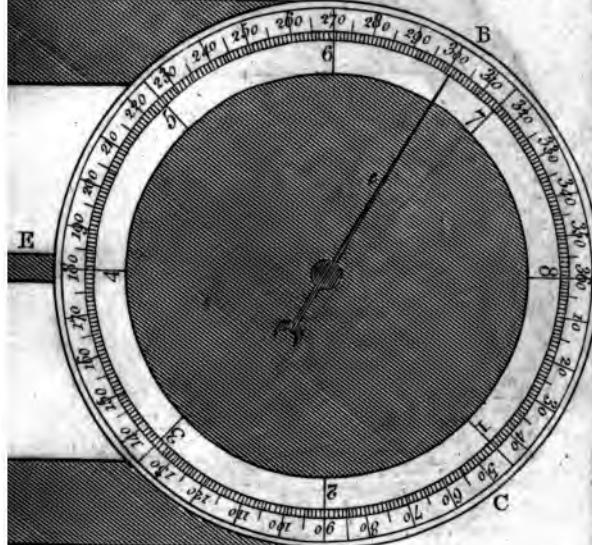
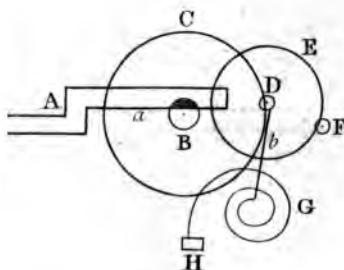
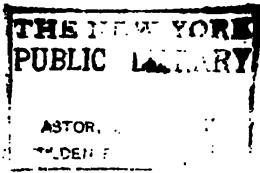


Fig. II.





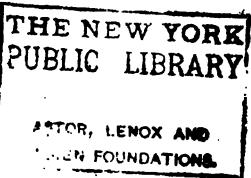
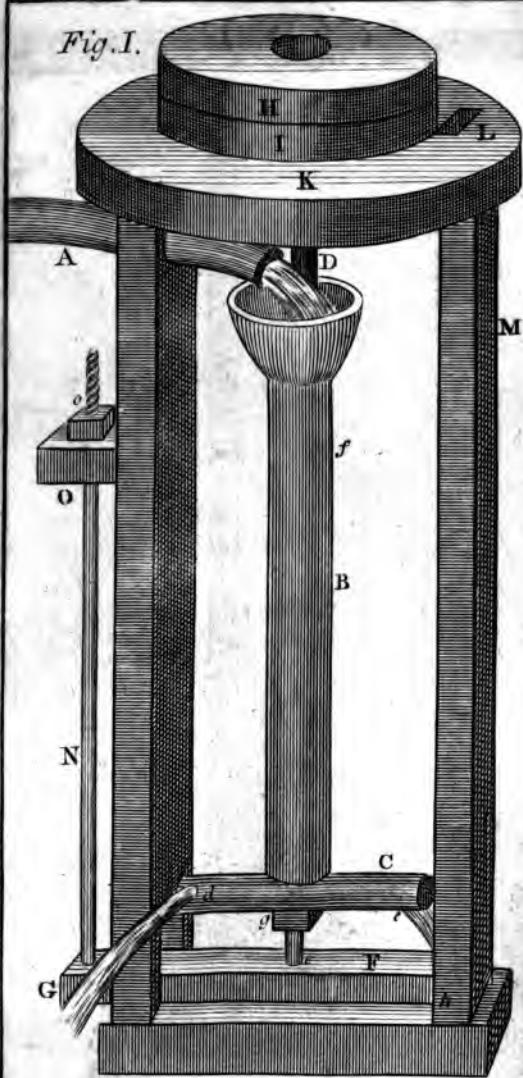


PLATE XXVI.

Fig. I.



Sup.

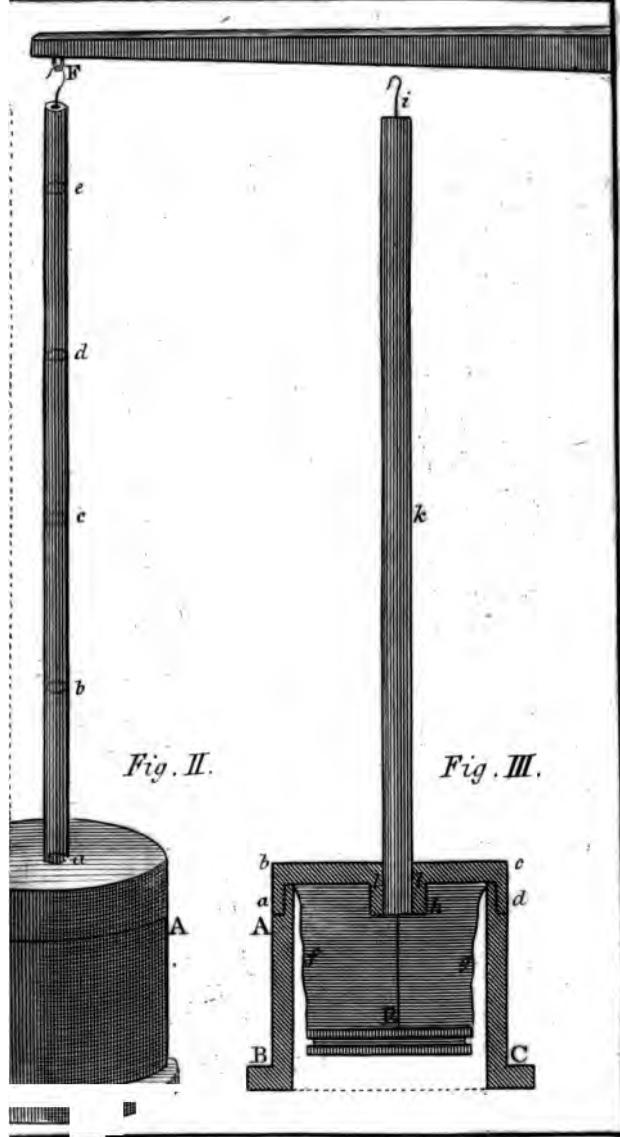
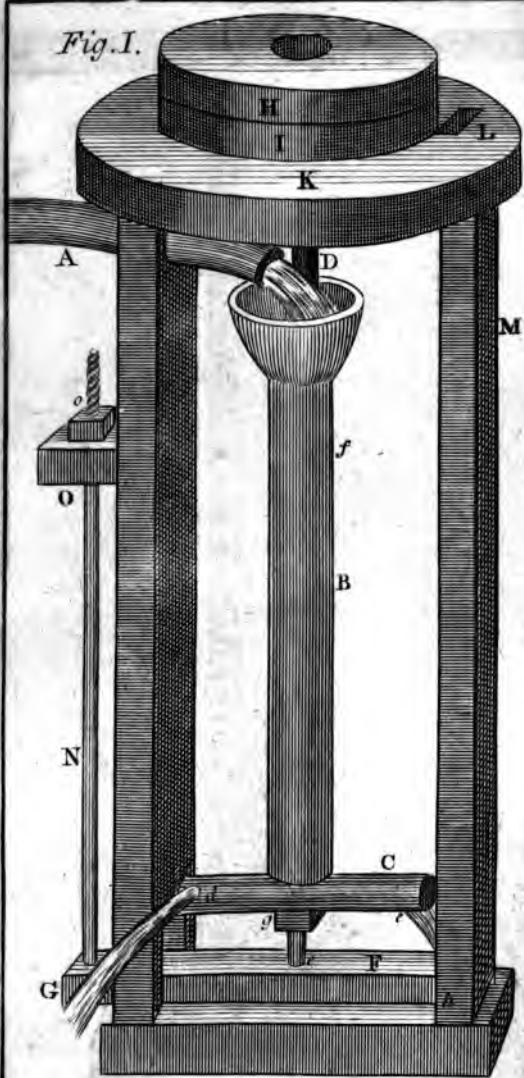
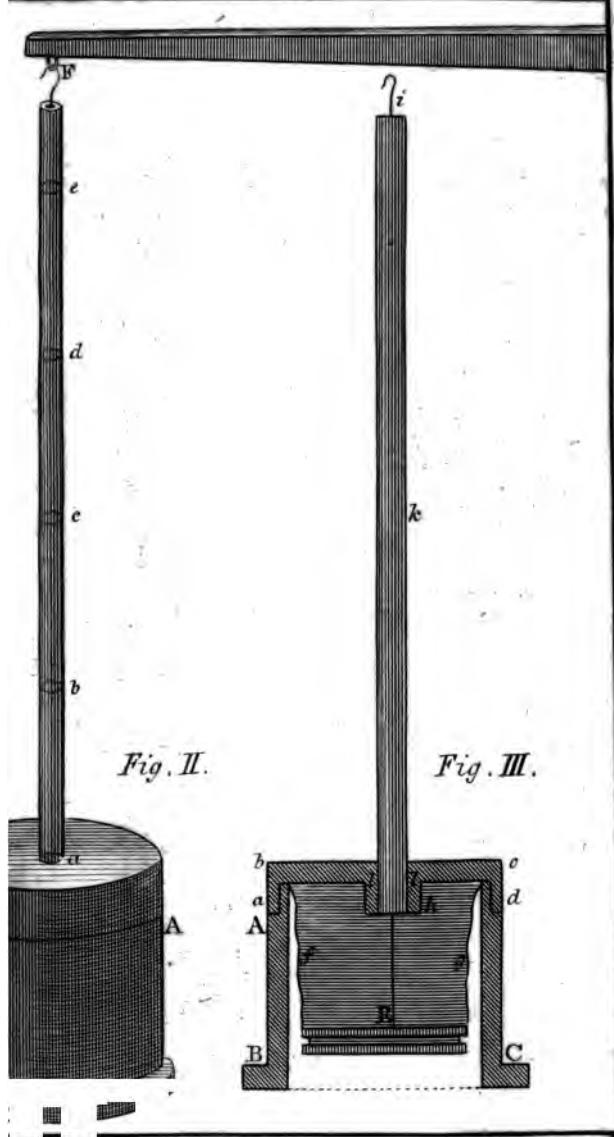


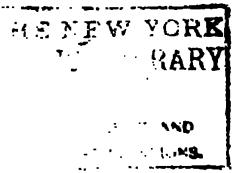
PLATE XXVI.

Fig. I.



Sup.





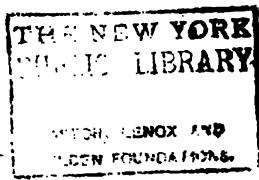


PLATE XXVII.

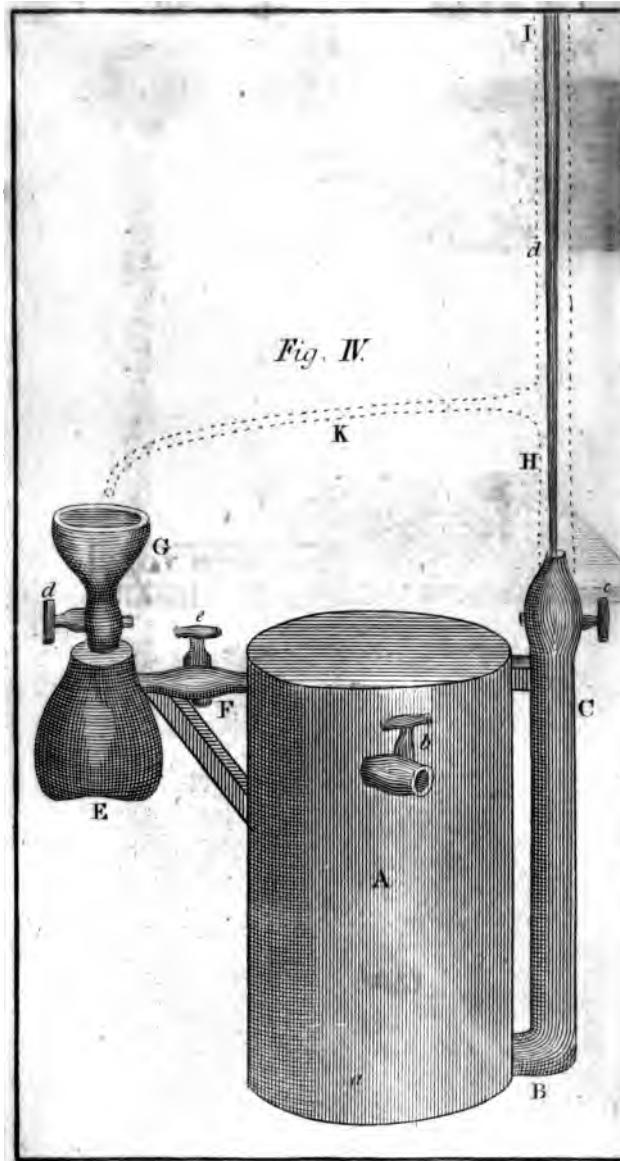
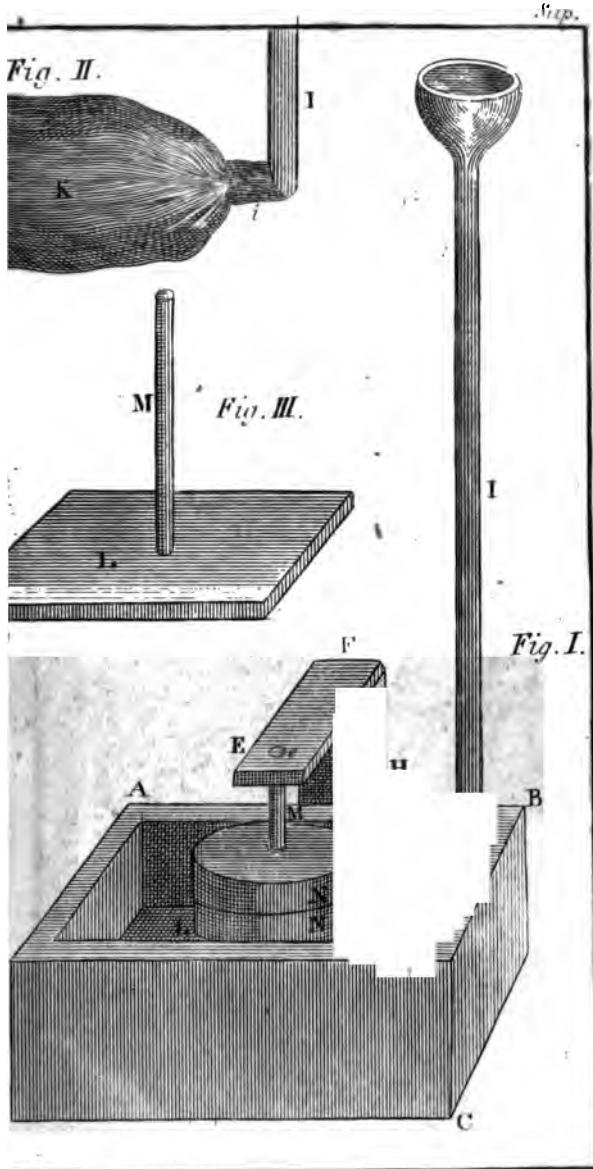
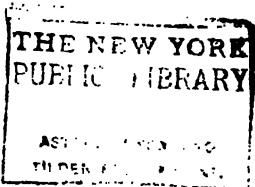


Fig. I.





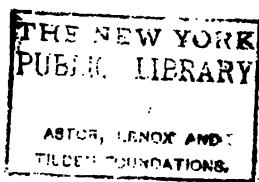
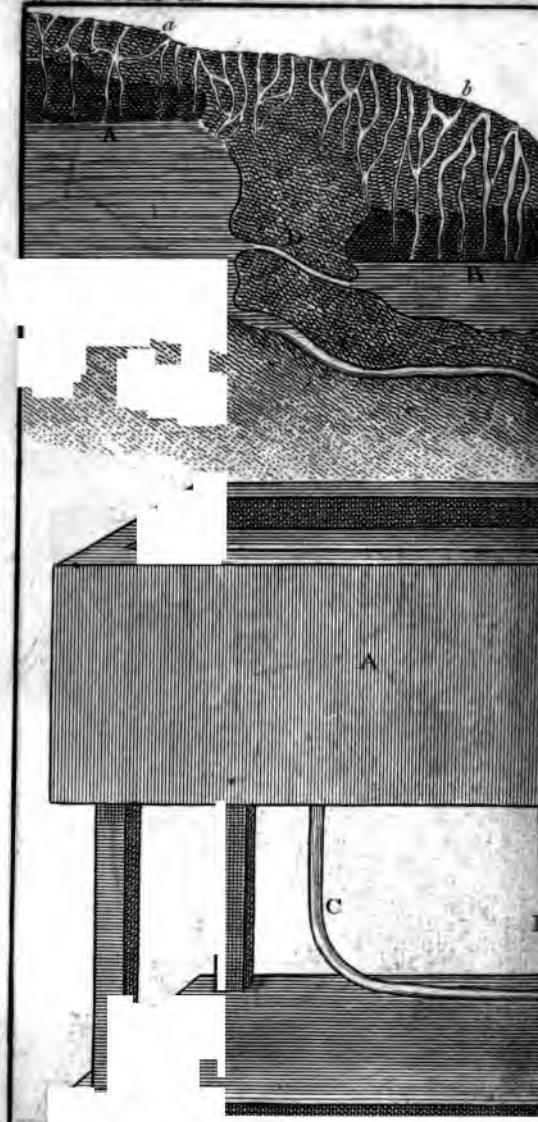
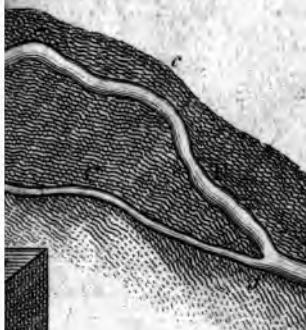


PLATE XXVIII.



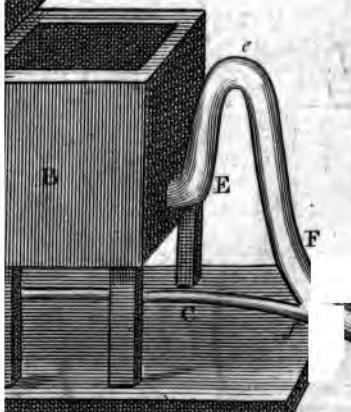
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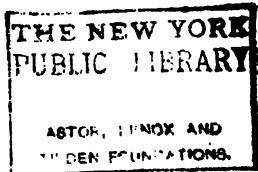
Fig. I.



G

Fig. II.





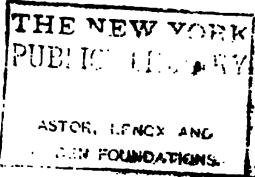
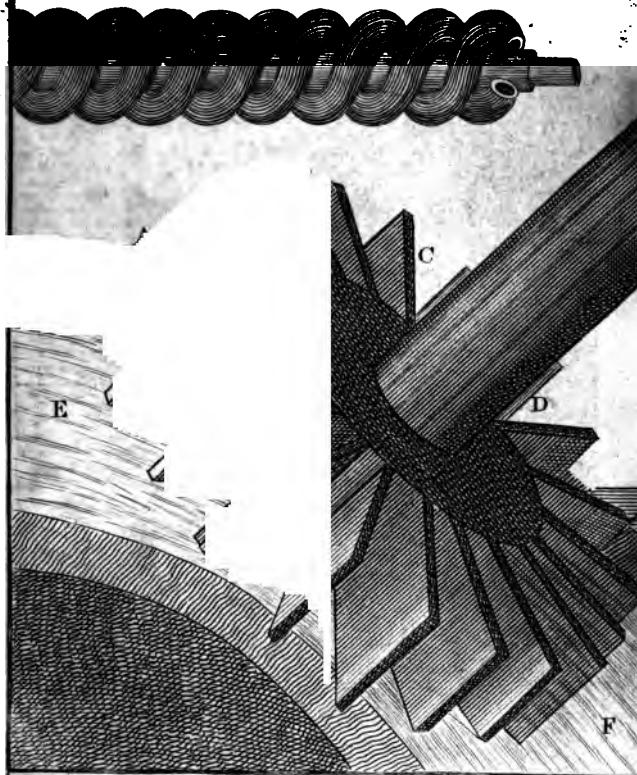


PLATE XXX.

Fig. III.



Sup.

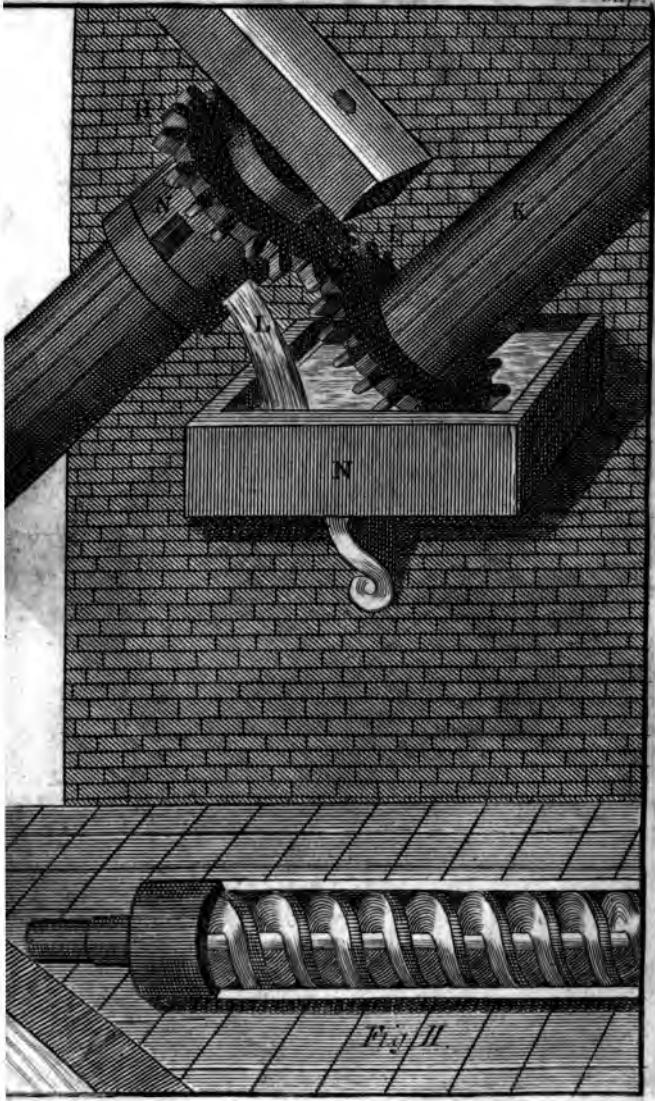
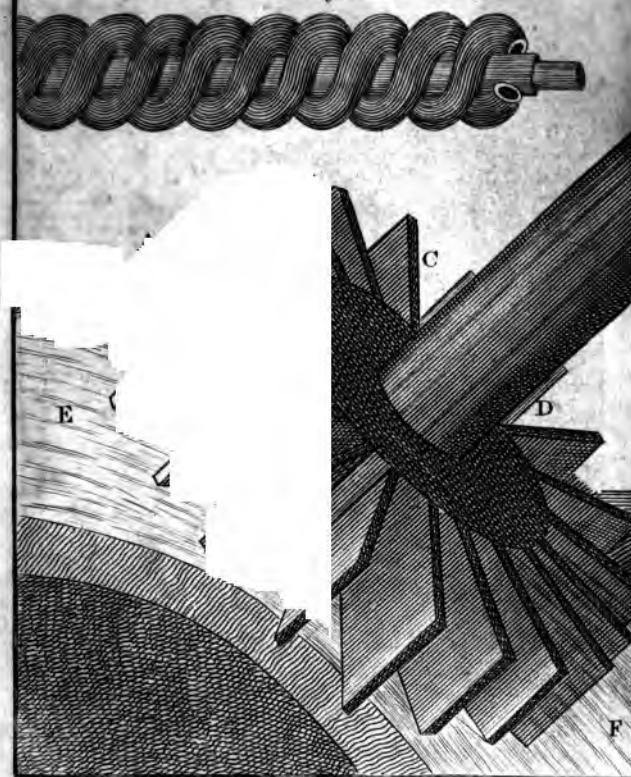
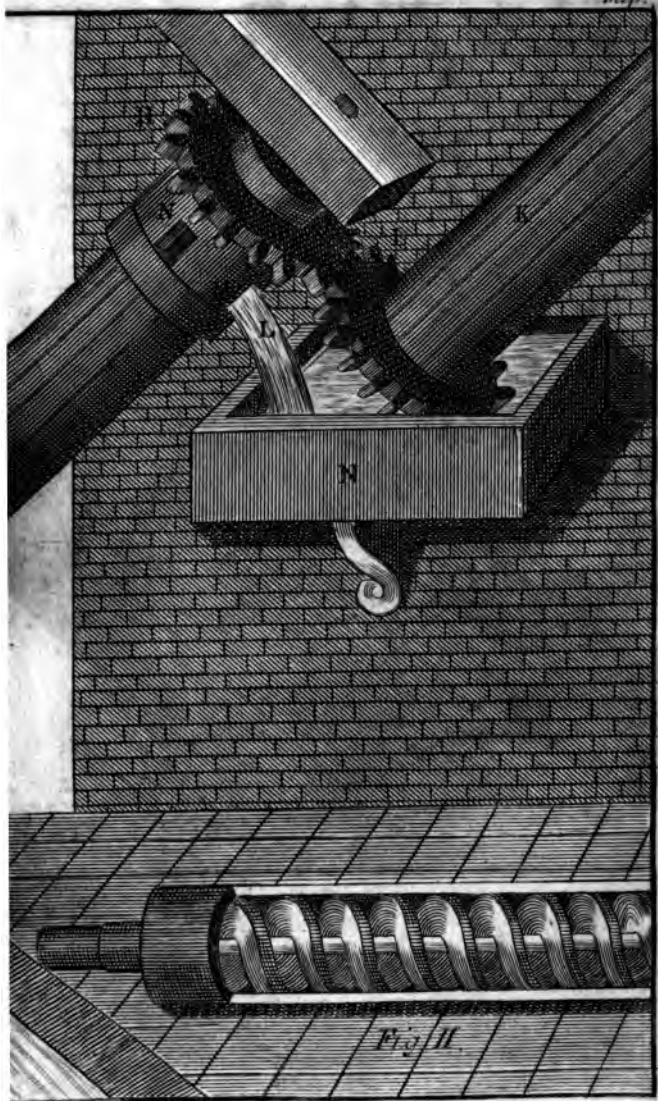


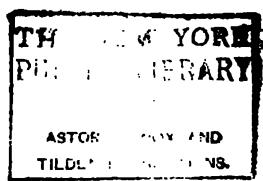
PLATE XXX.

Fig. III.



Sup.





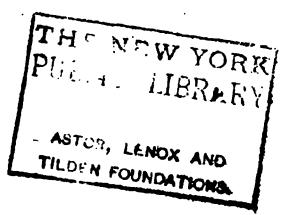
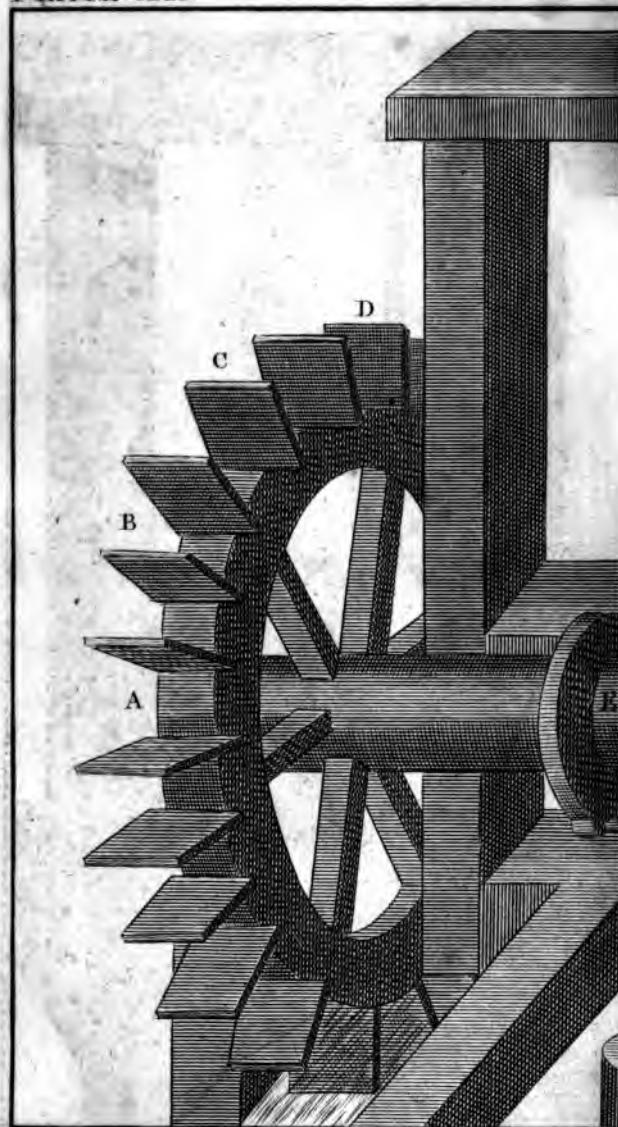
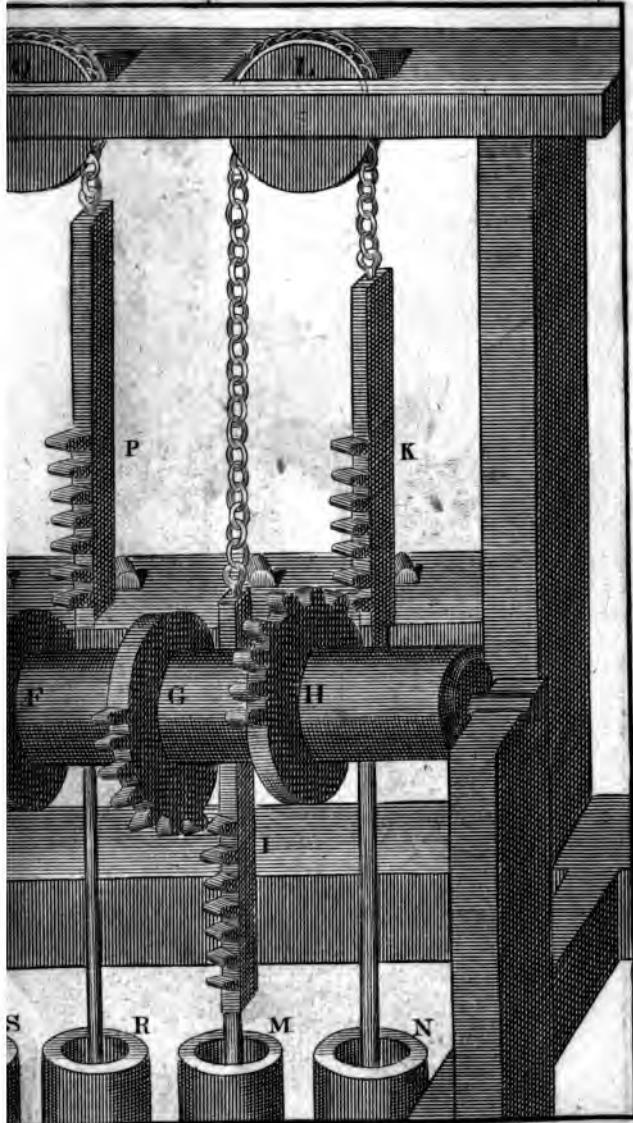
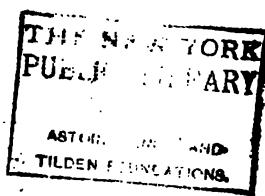


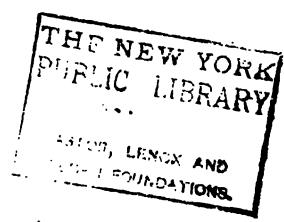
PLATE XXX.



Supr.







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TILDEN FOUNDATIONS.

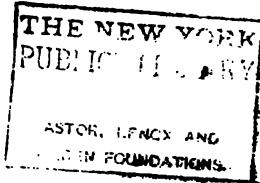


PLATE XXX.

Fig. III.



Sup.

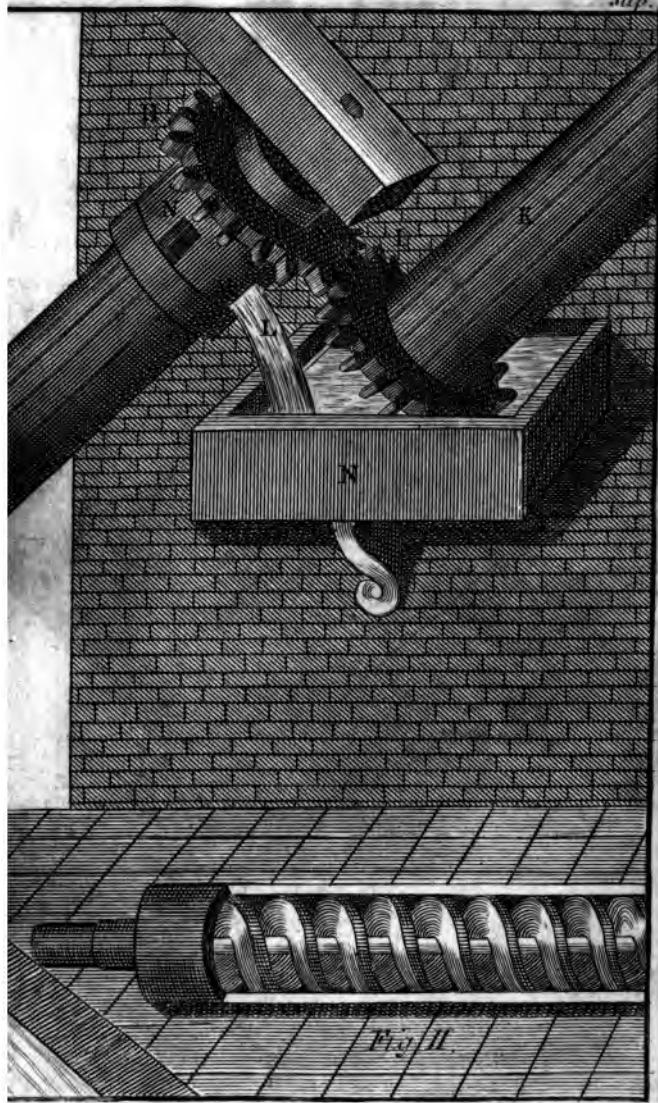
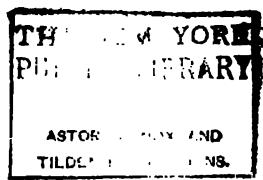


Fig. II.



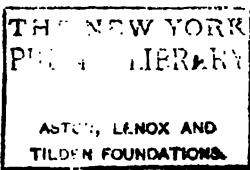
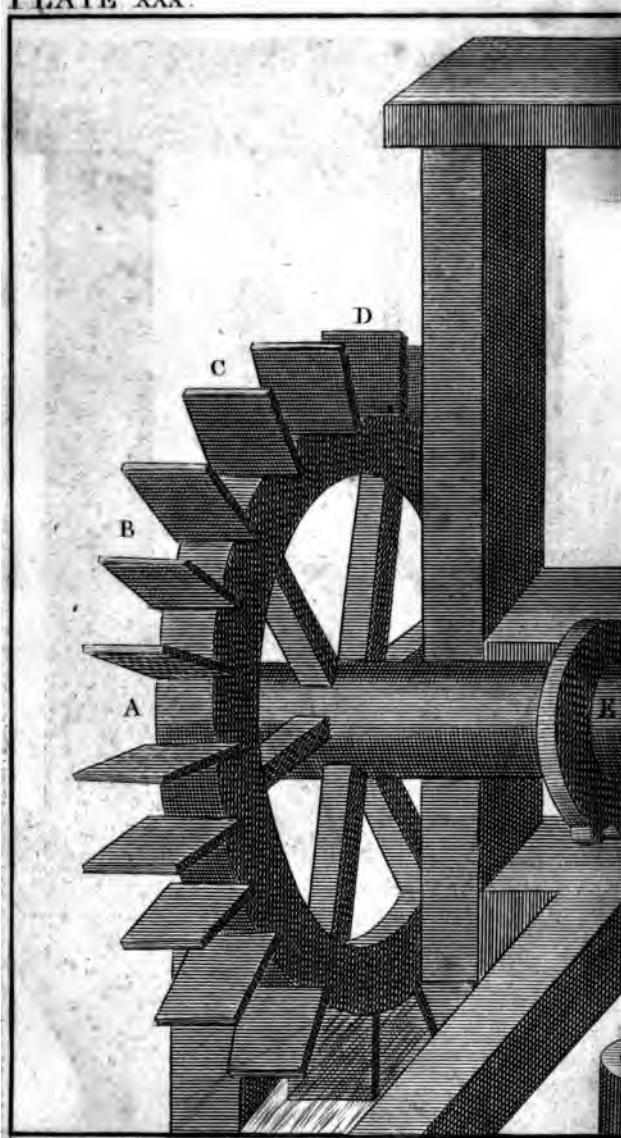
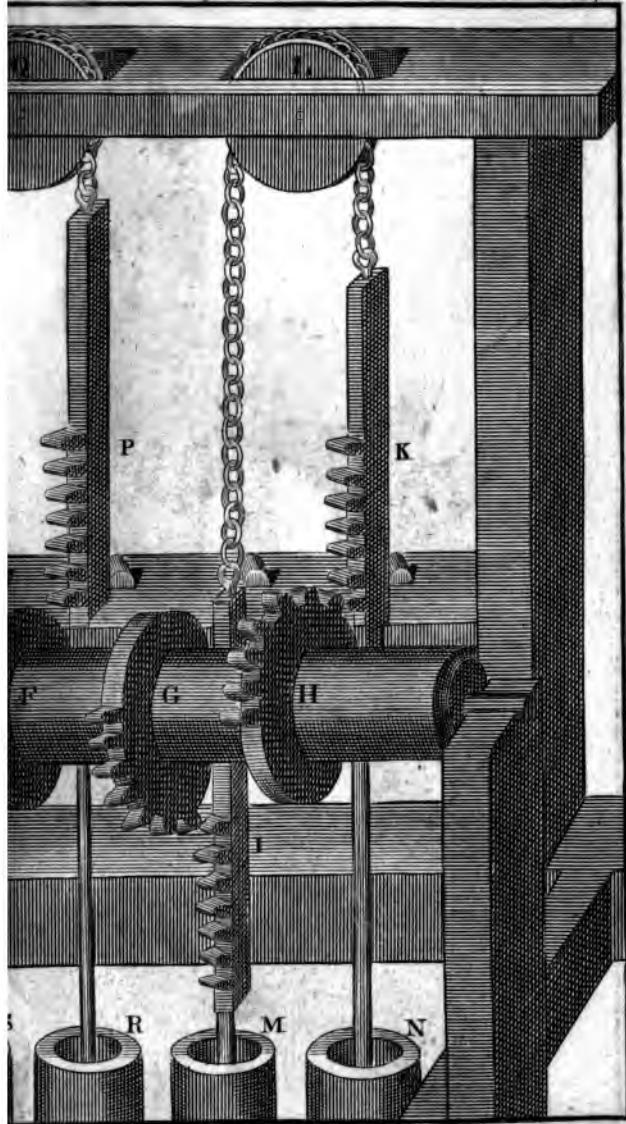
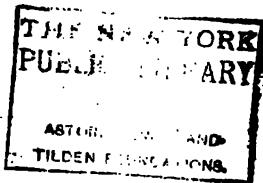


PLATE XXX.



Supr





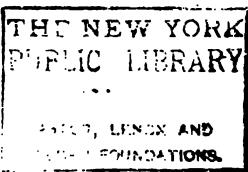
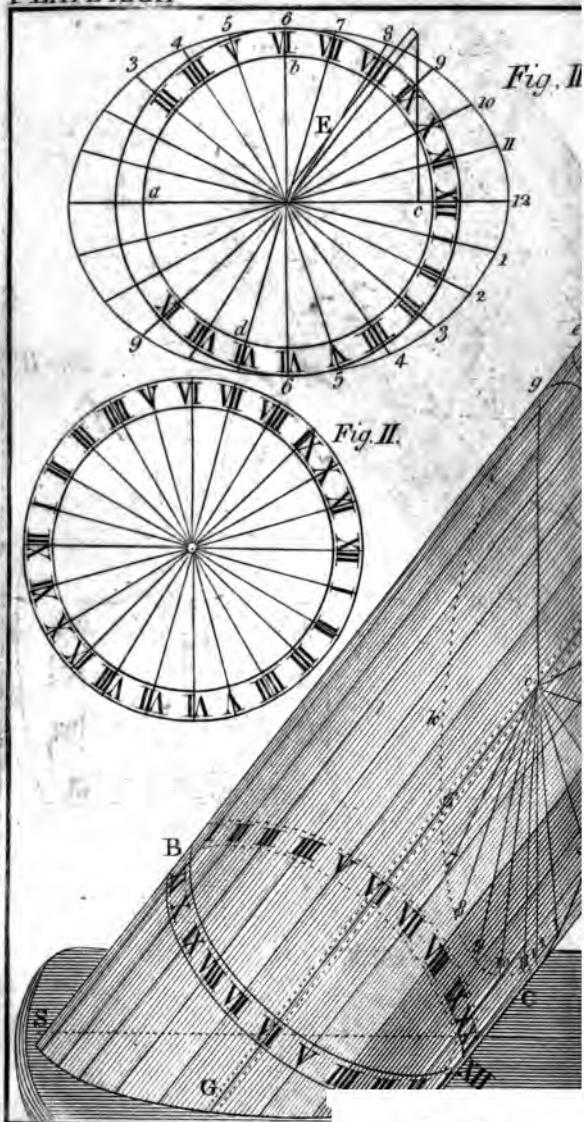
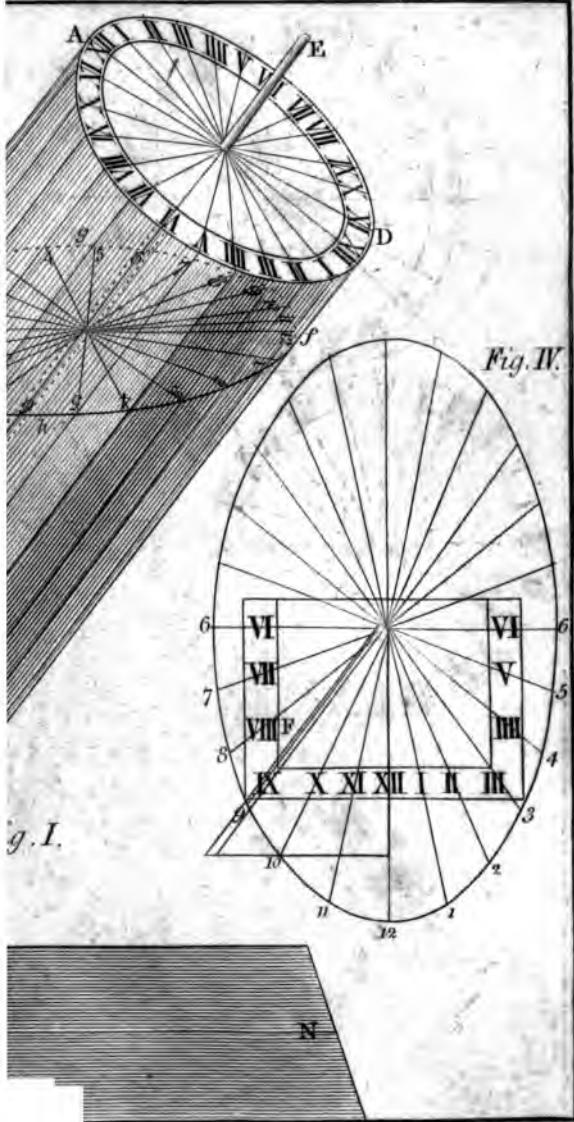


PLATE XXXI

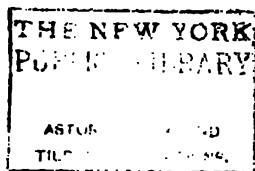


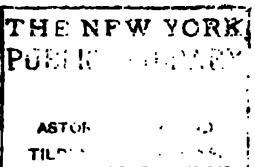
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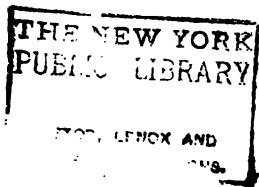


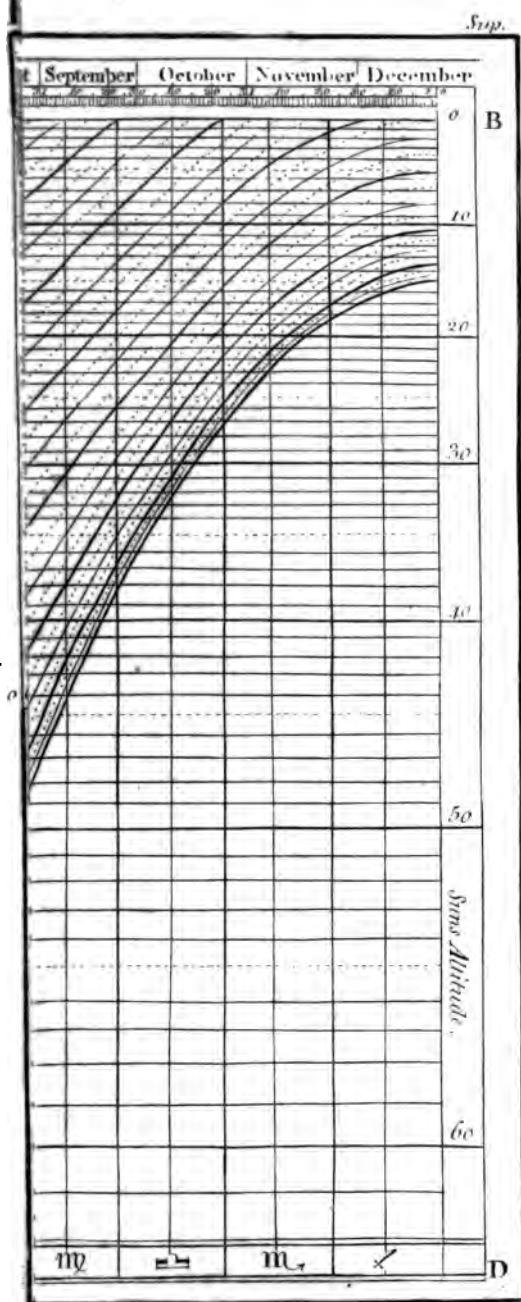
g. I.

Fig. IV.









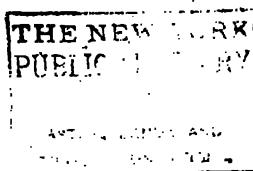


PLATE XXXIII

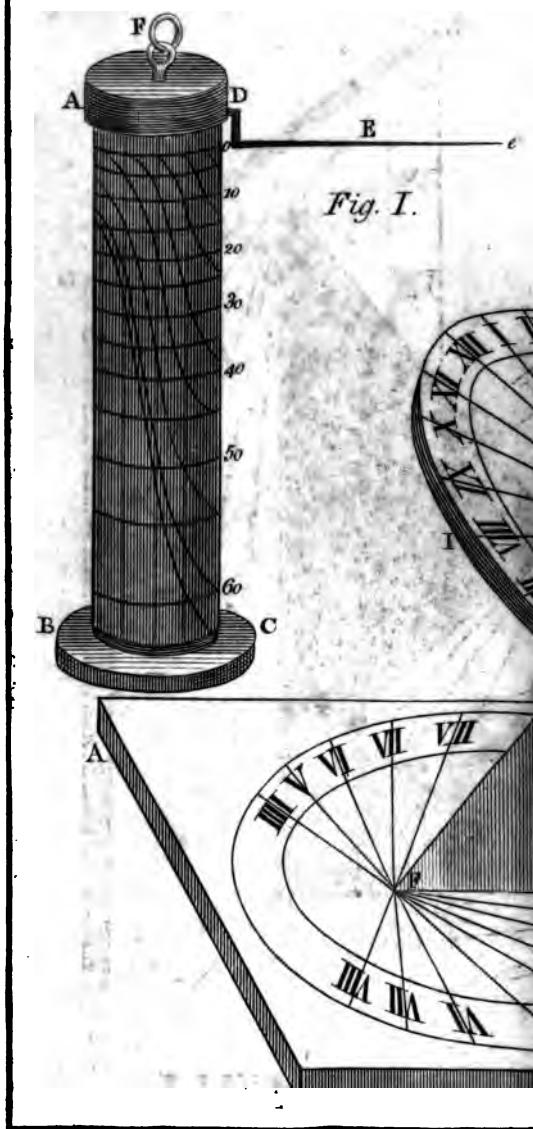
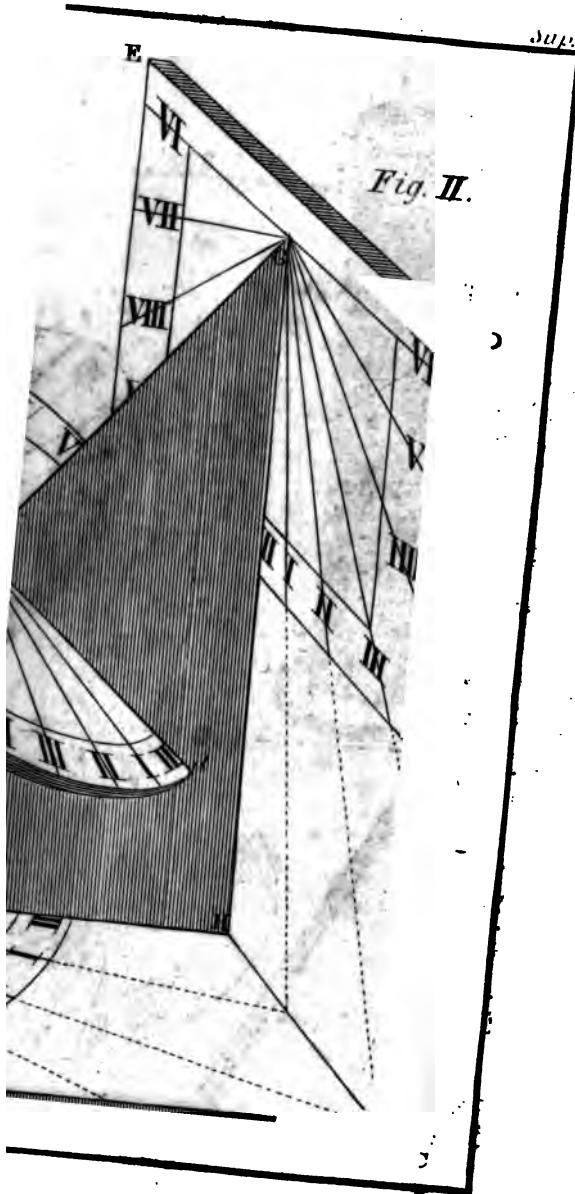
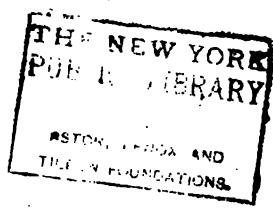
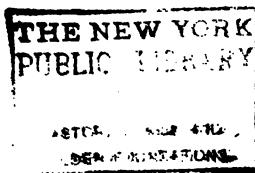
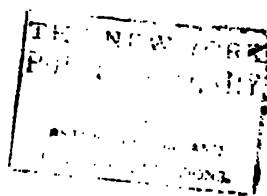


Fig. II.









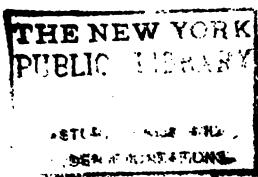
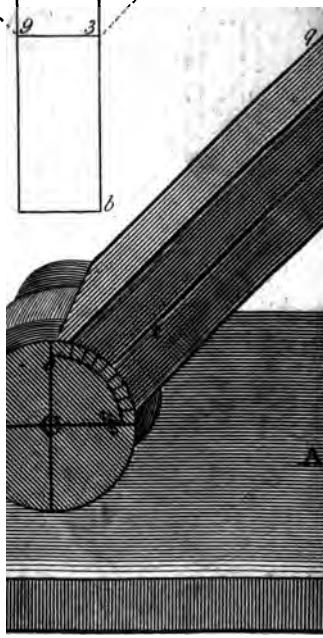
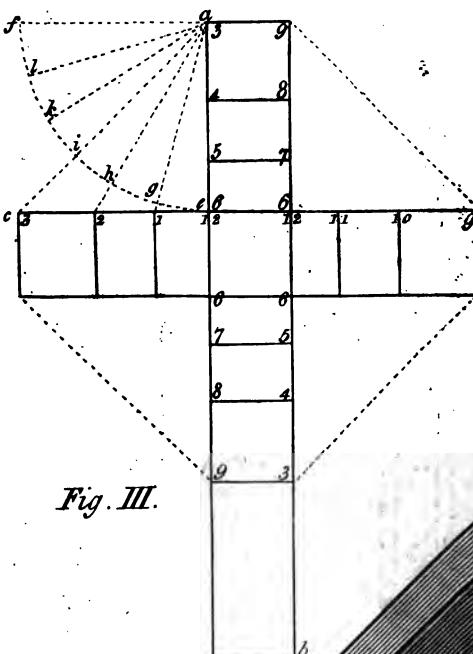


PLATE XXXIV.



Sup.

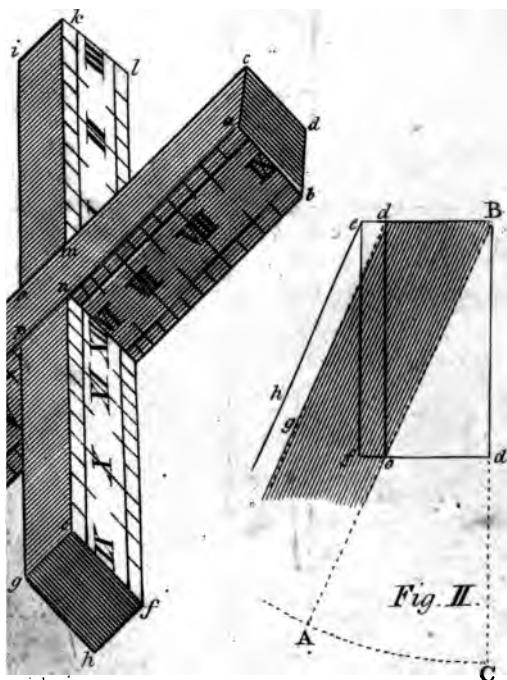
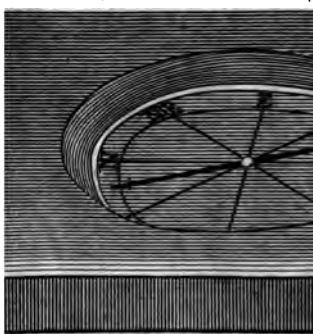
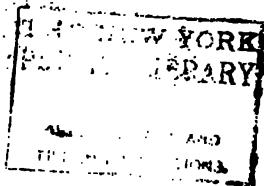
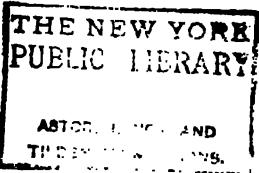


Fig. II.









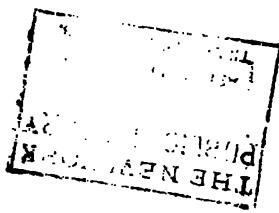
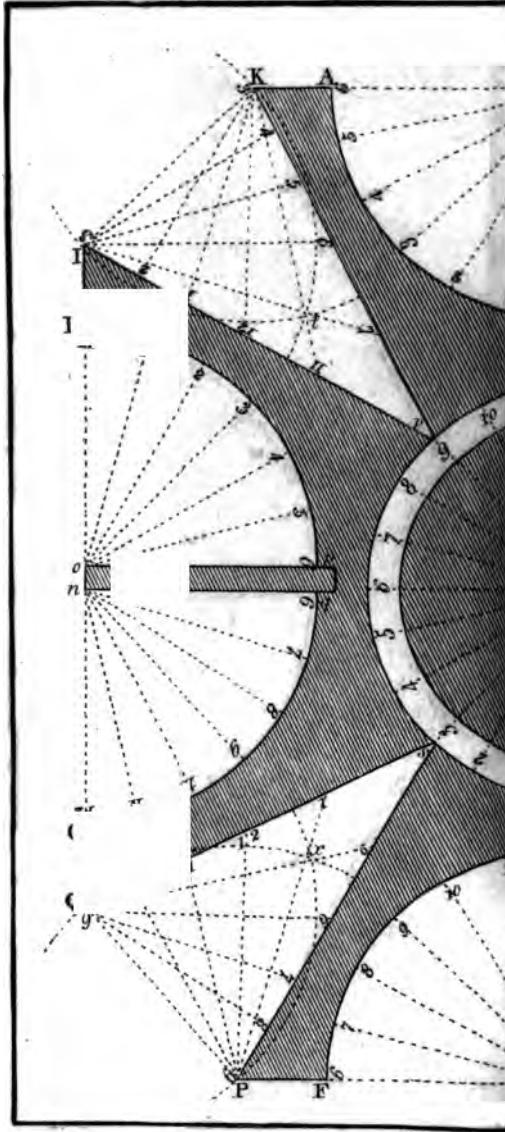
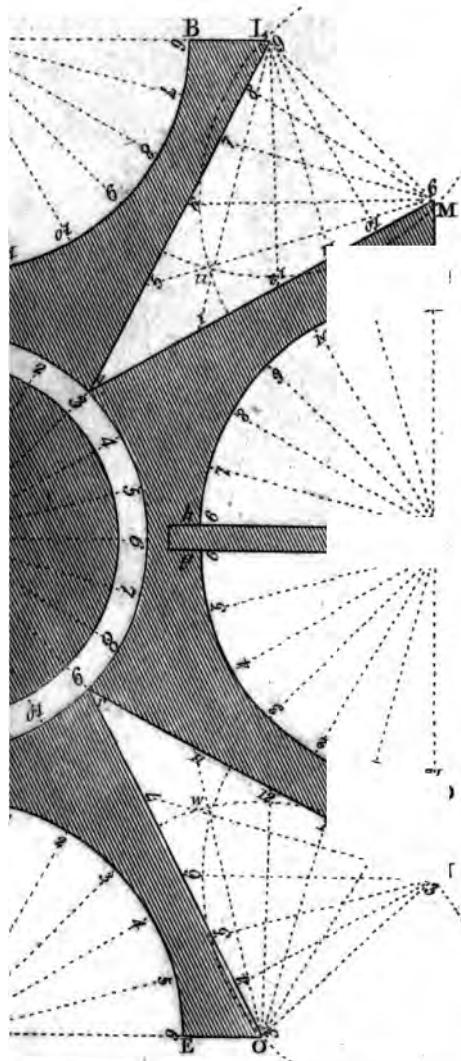
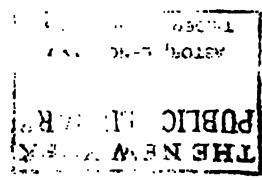


PLATE XXXVI



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Fig. 2.

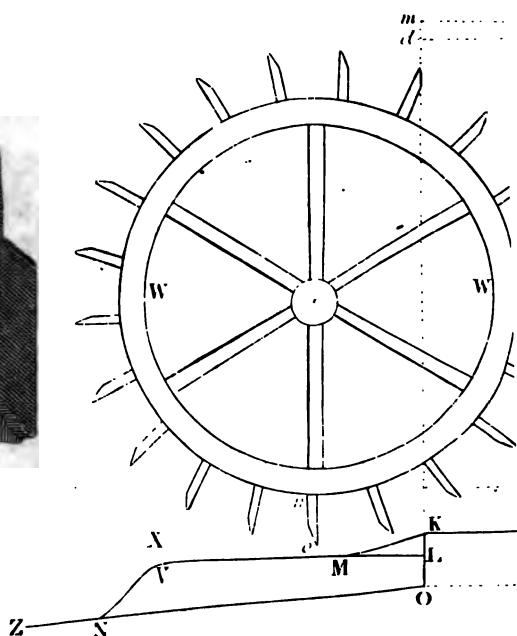
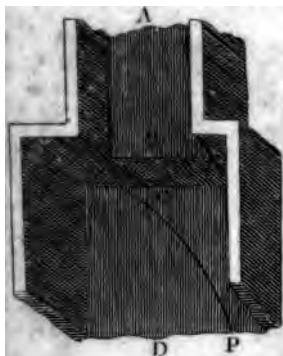
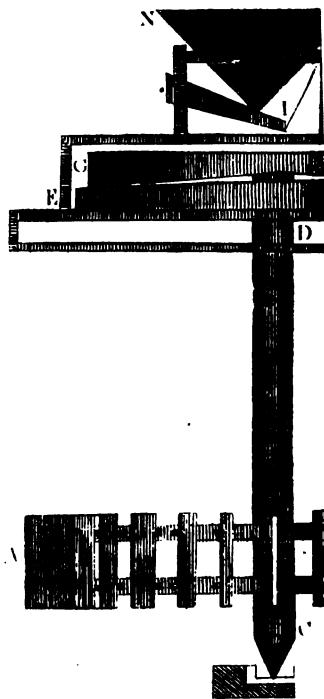
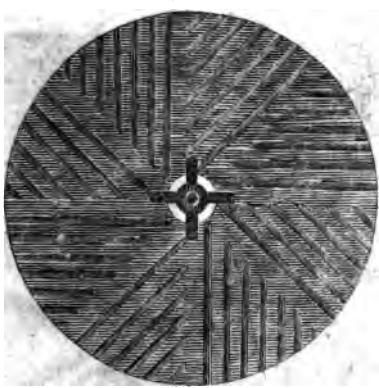
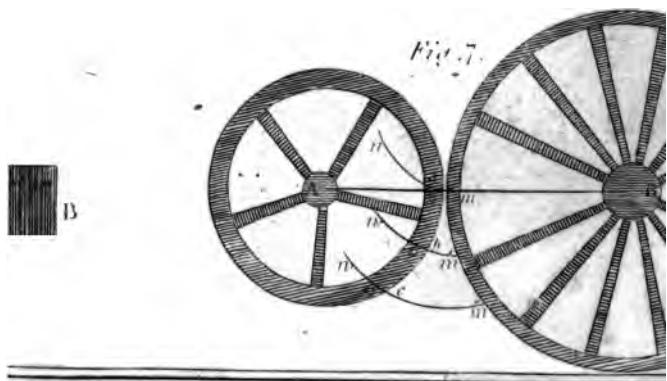
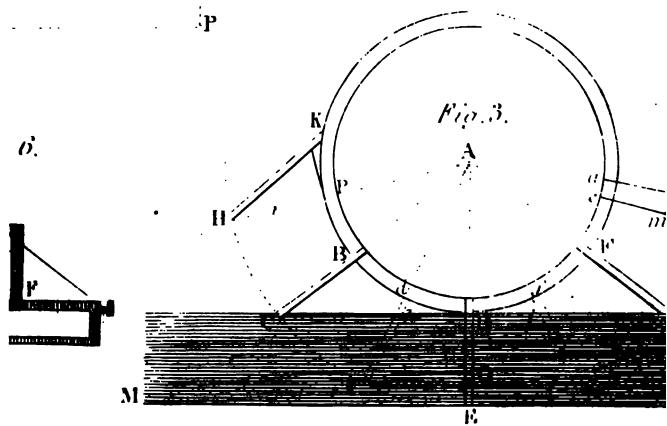
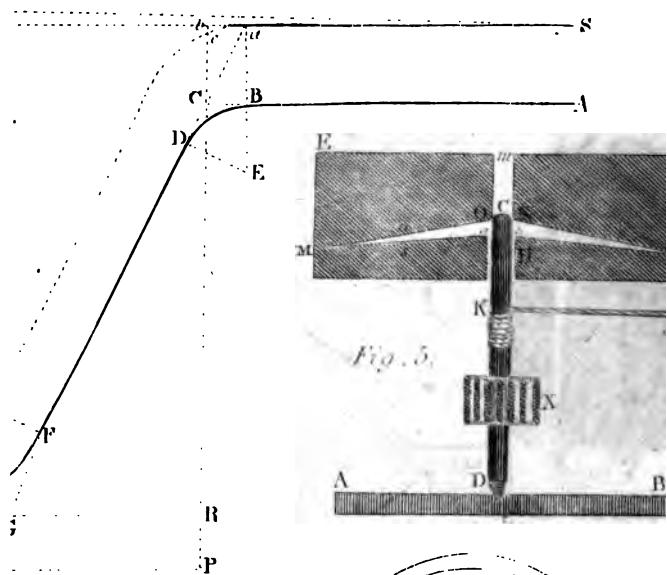
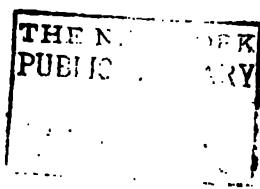


Fig. 1.







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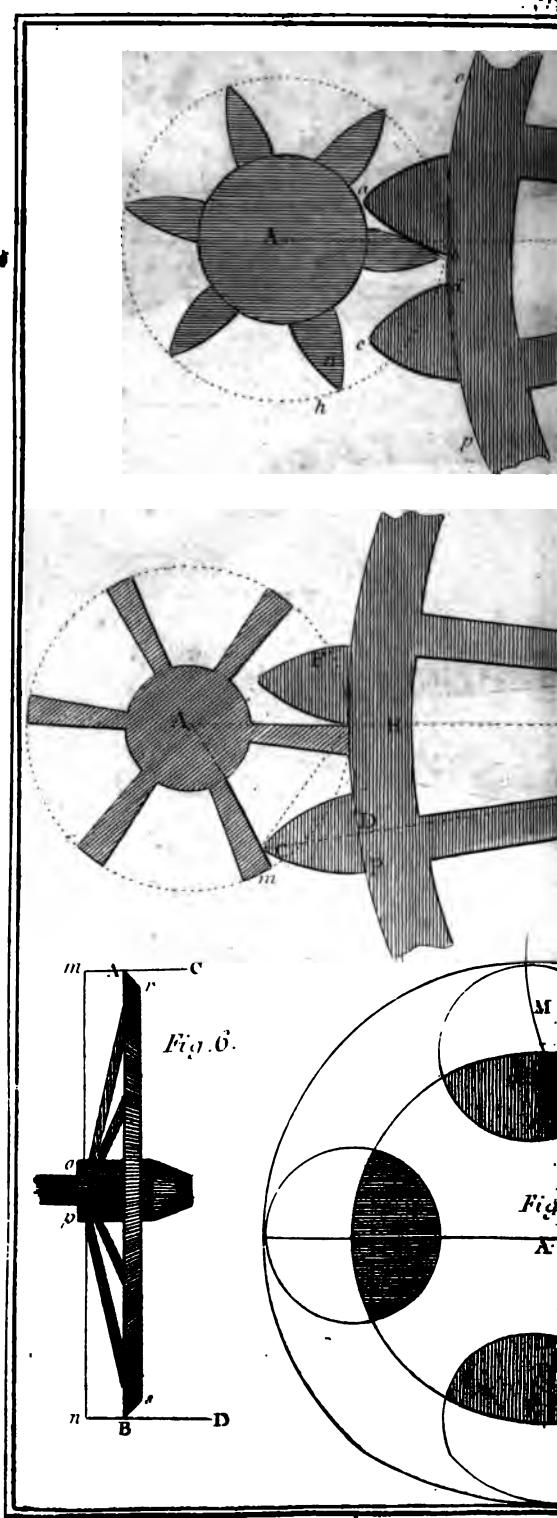


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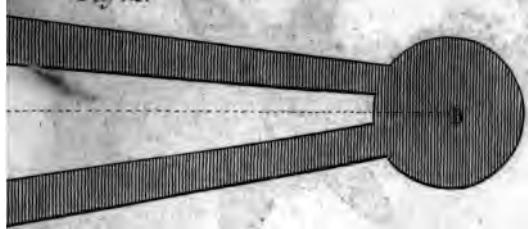


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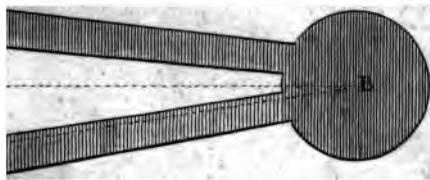
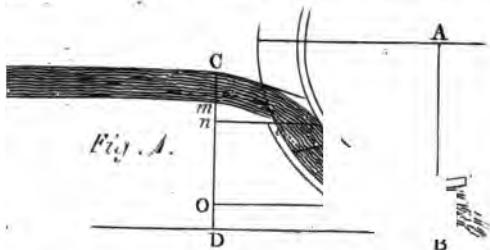


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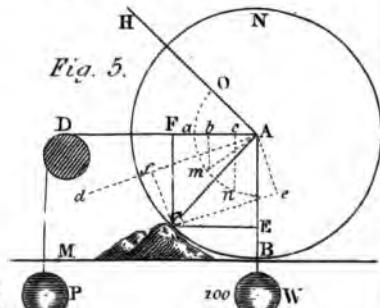
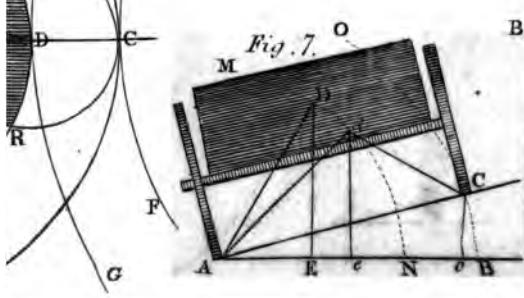


Fig. 7.



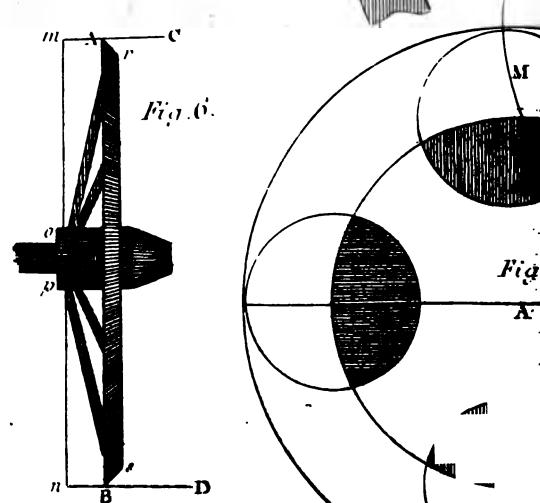
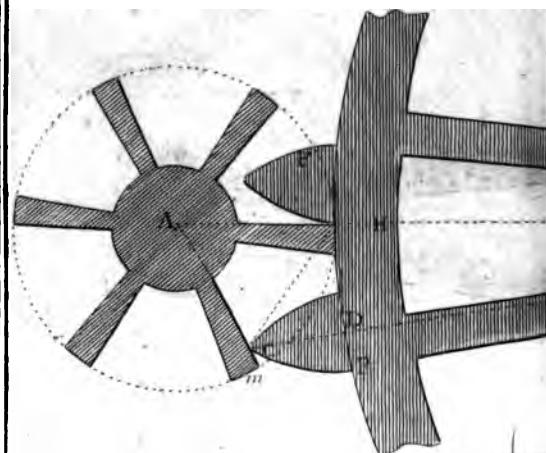
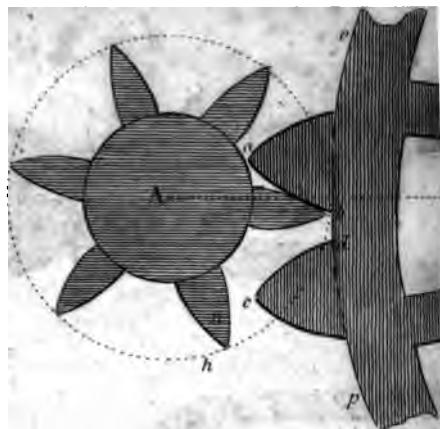


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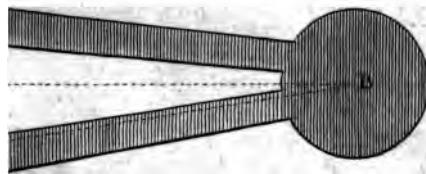
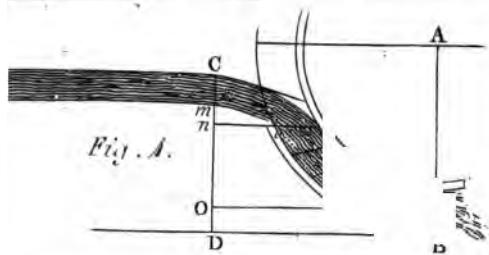
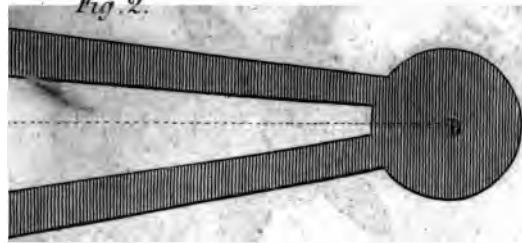
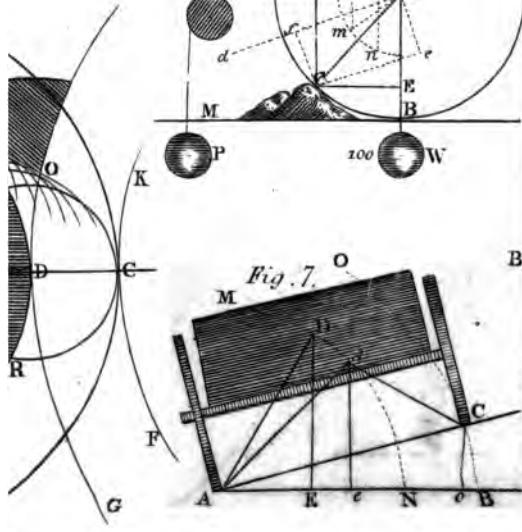
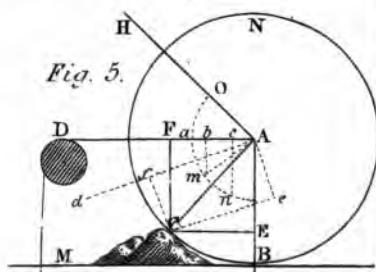
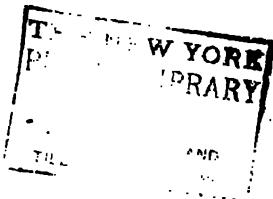


Fig. 5.





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Fig. 1.

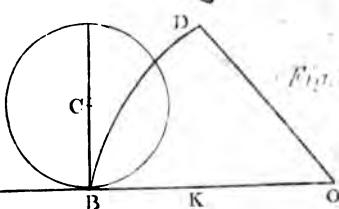
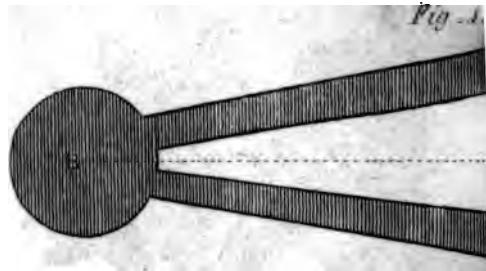
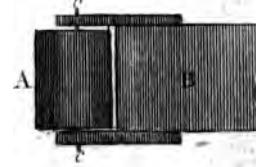
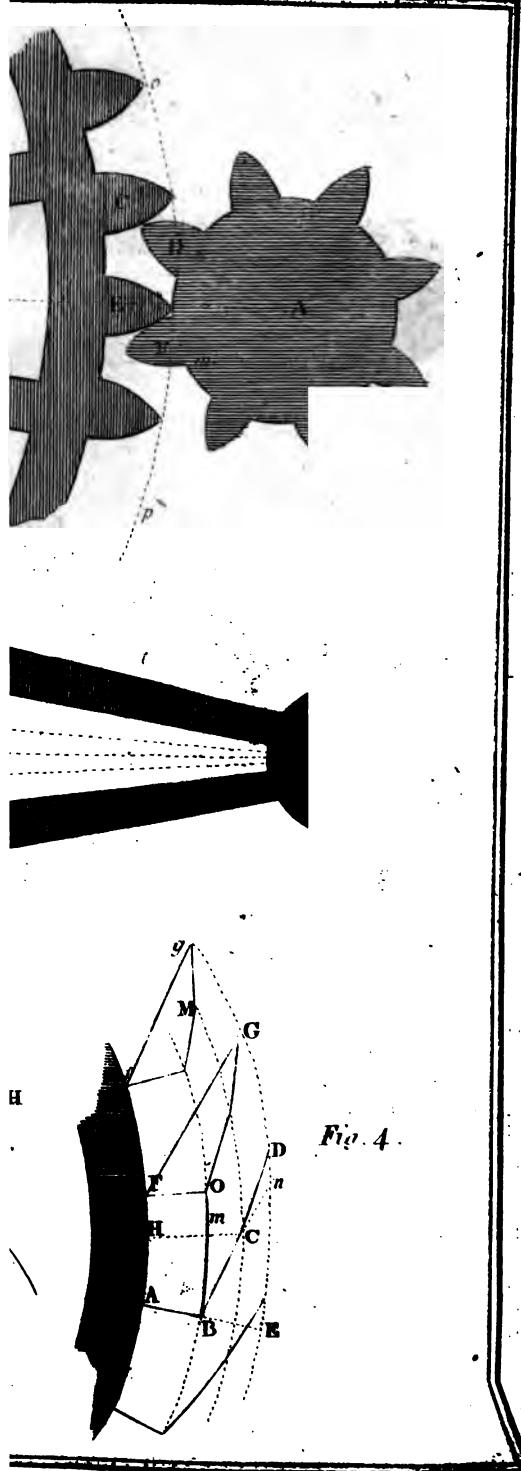
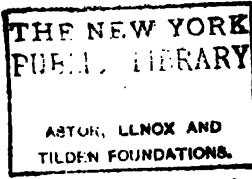


Fig. 3.







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EDITOR, L. W. AND
PUBLISHER, J. C. COOK.

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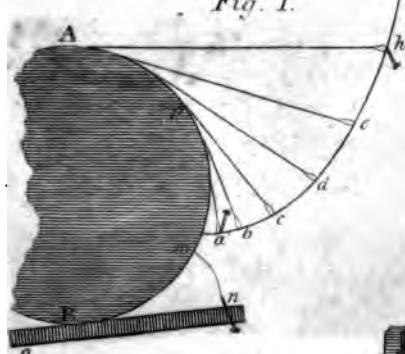
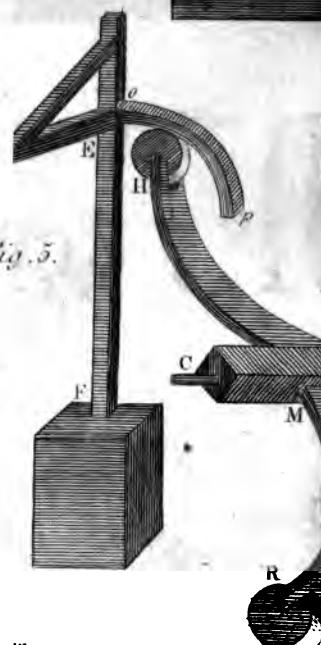


Fig. 2.



B

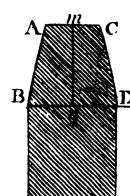


Fig. 7.

Fig. 3.

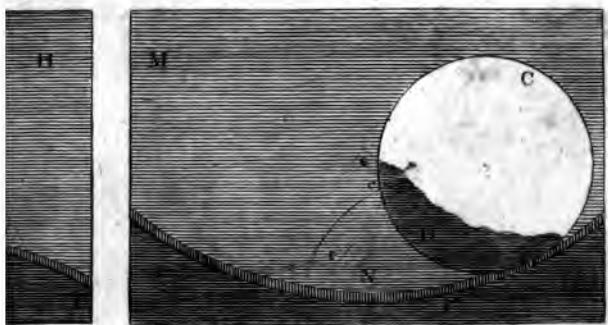


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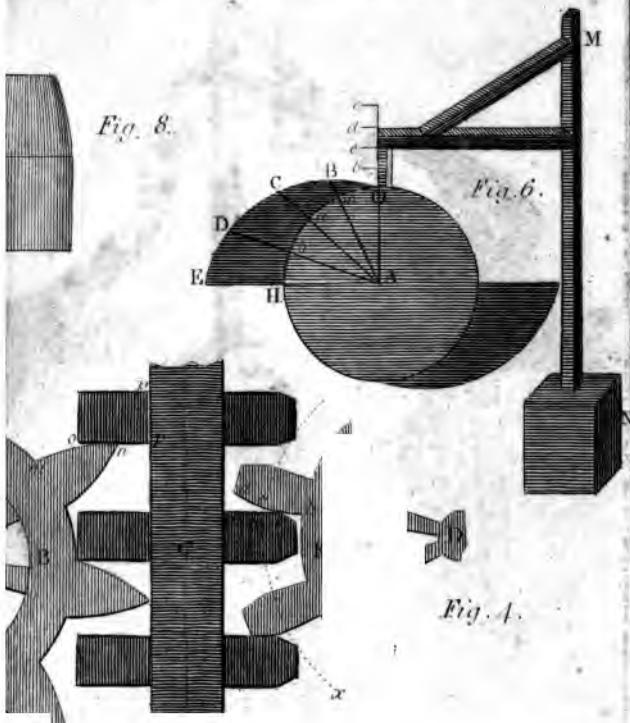
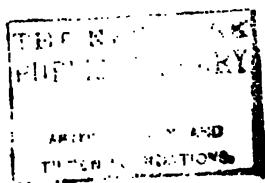
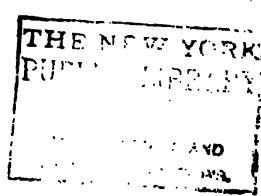
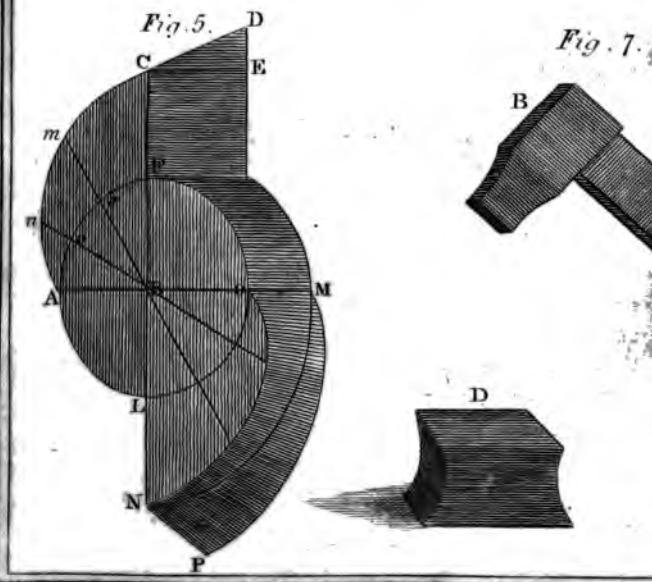
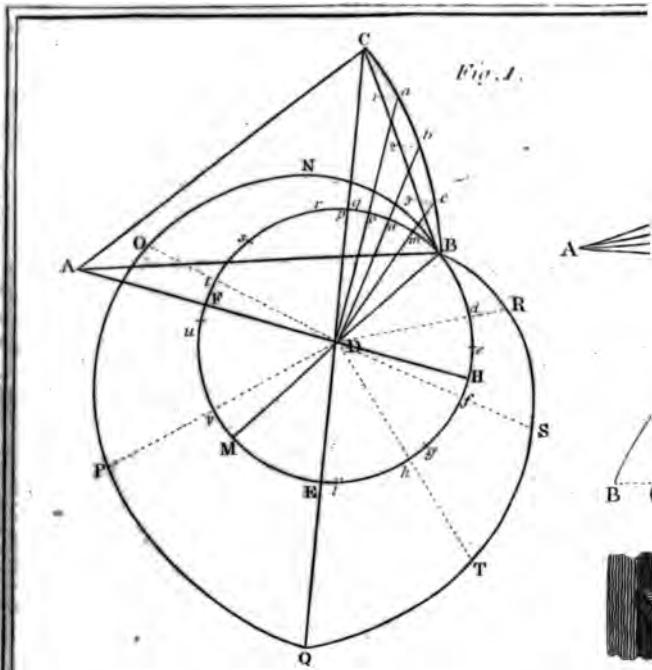


Fig. 4.







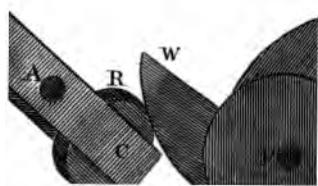
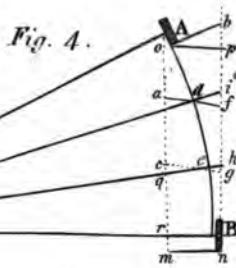
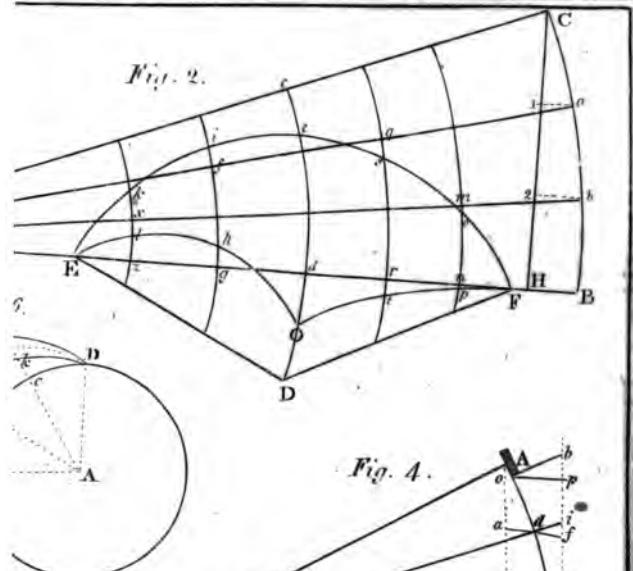
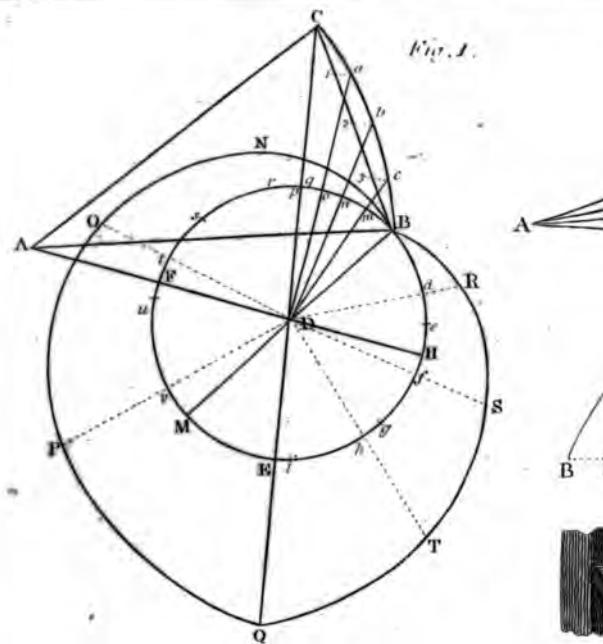


Fig. 1.



A

B



Fig. 7.

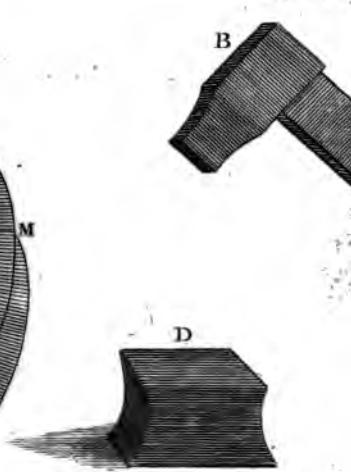
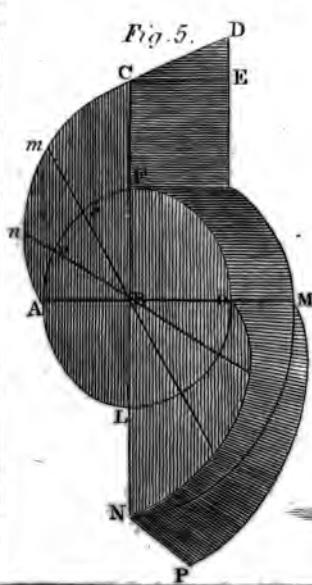
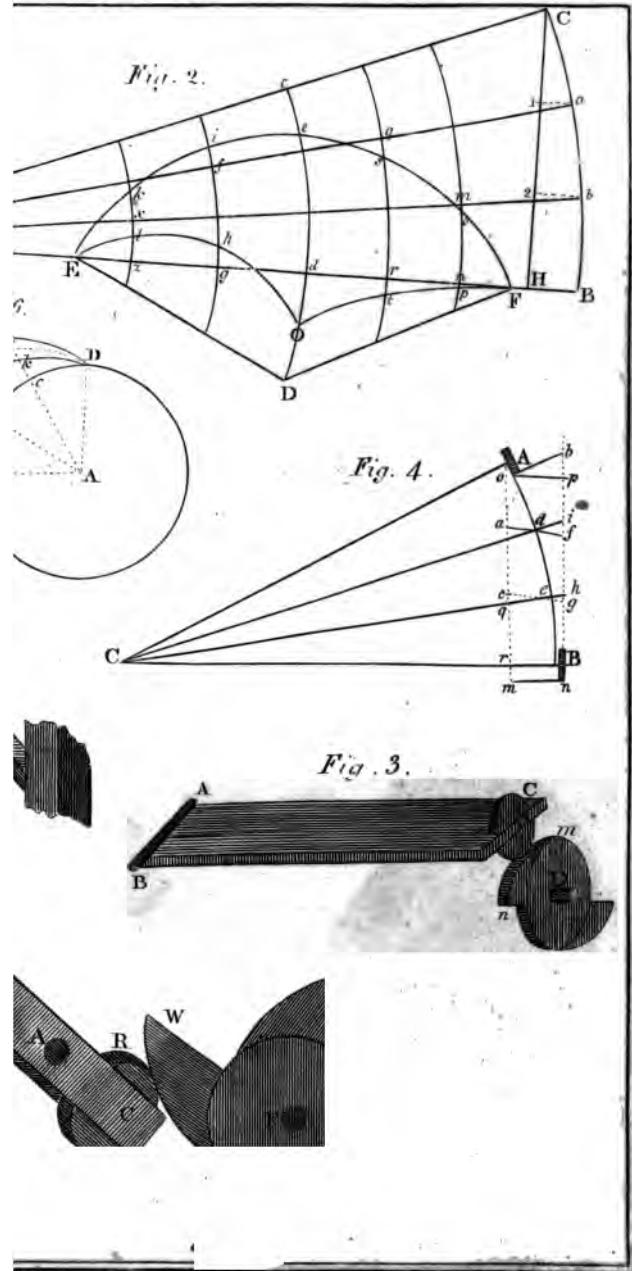
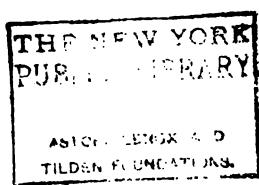


Fig. 5.

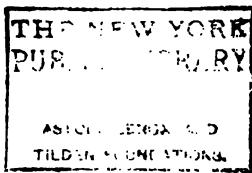


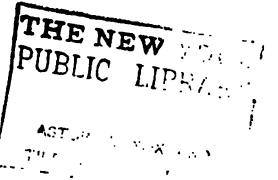


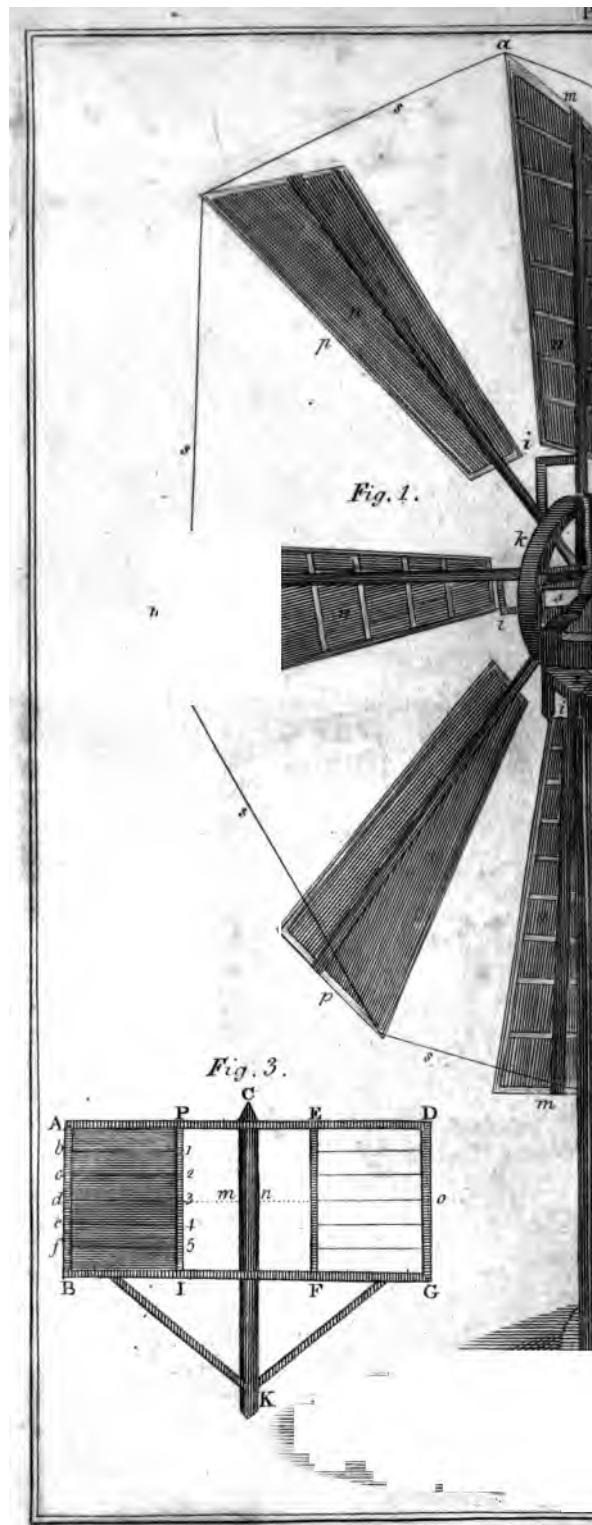


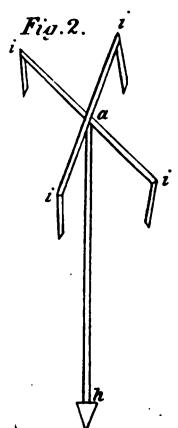
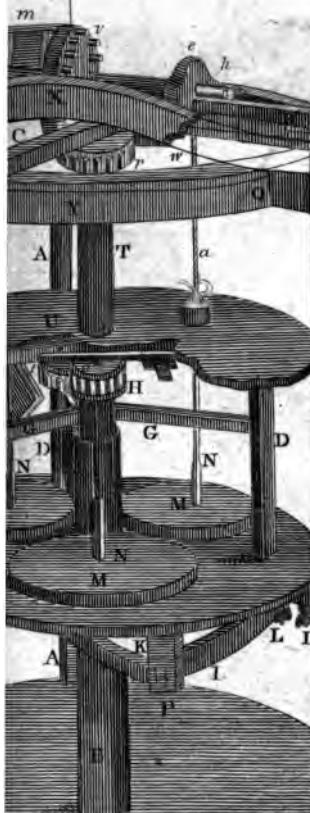
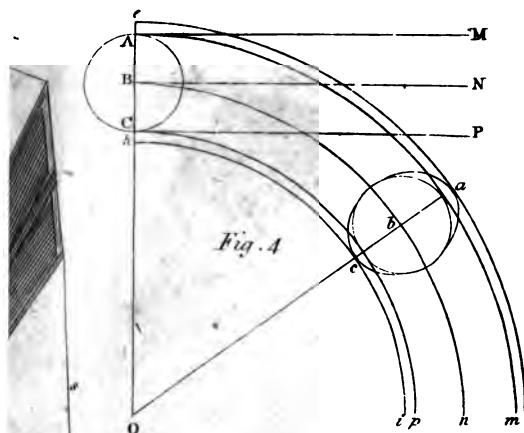
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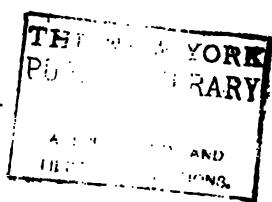
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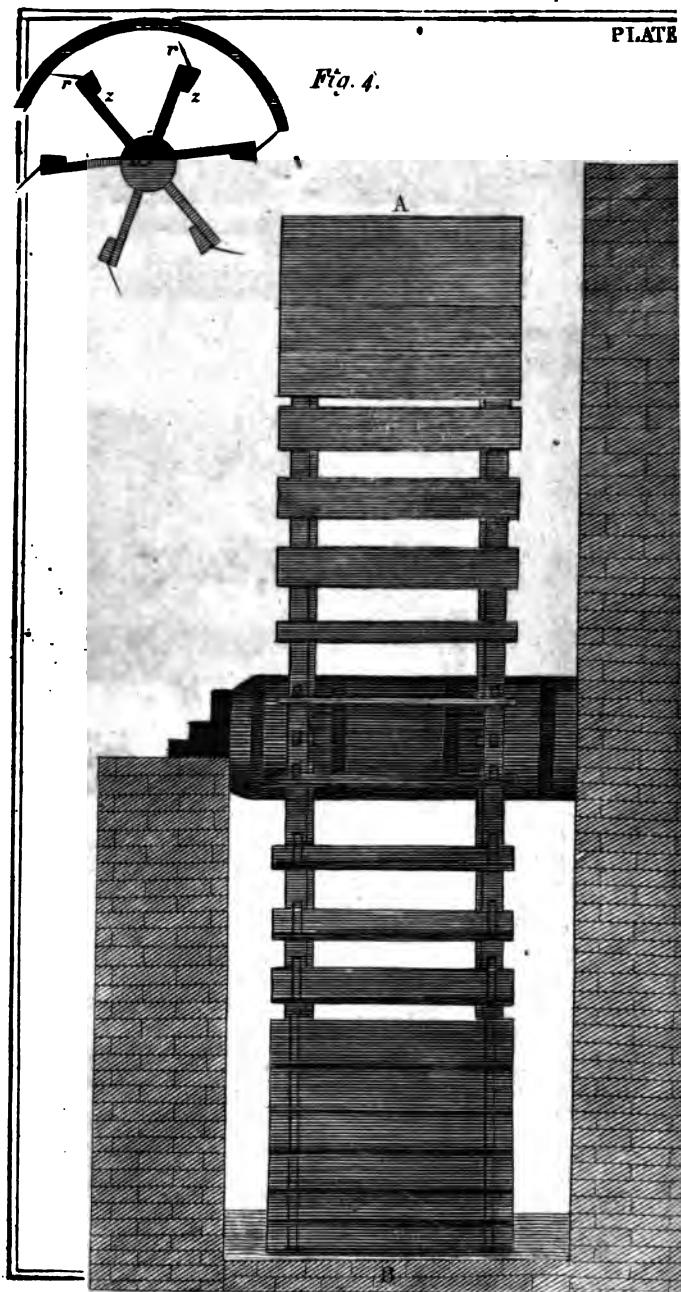


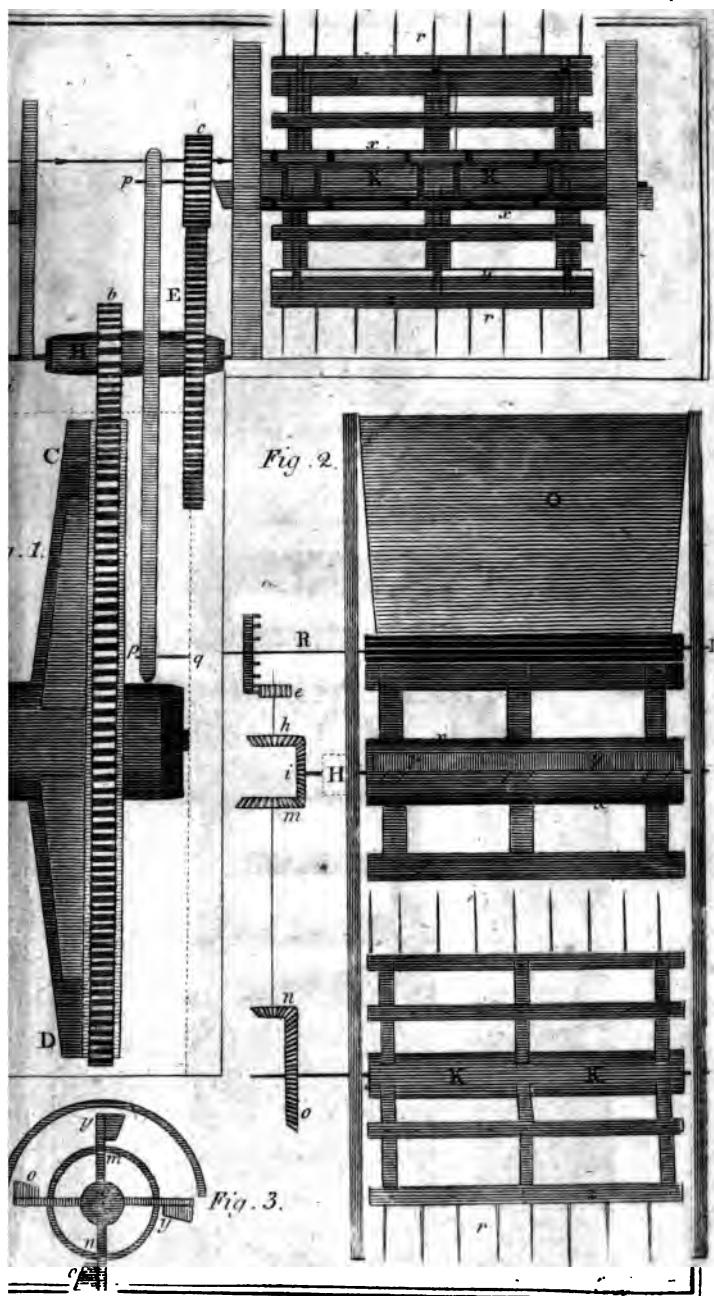




PLATE

Fig. 4.





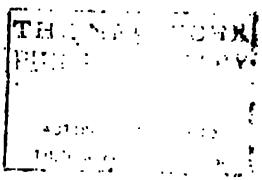
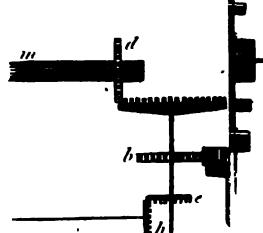
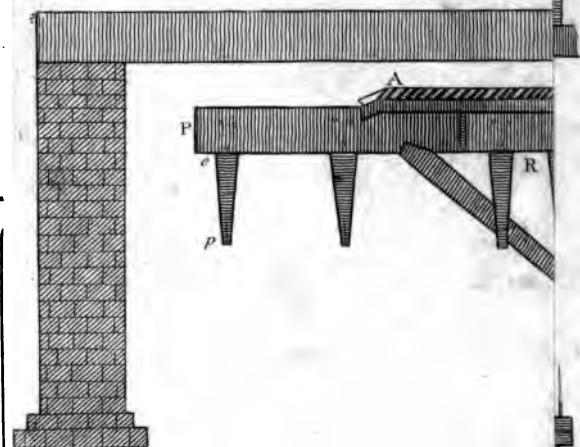
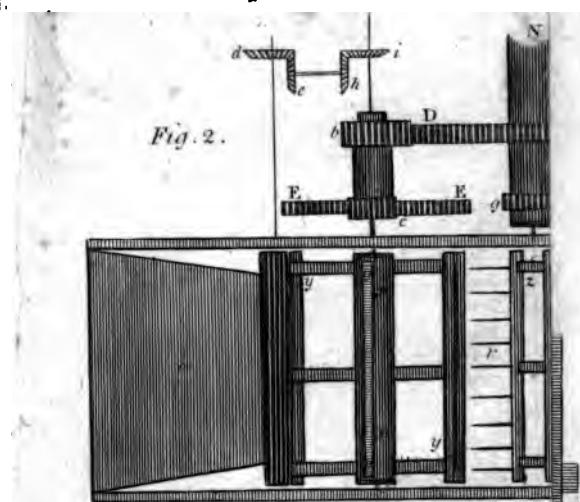
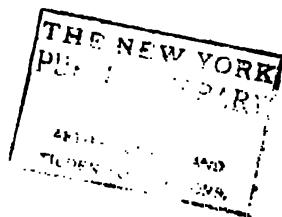
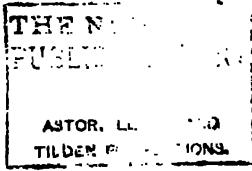


Fig. 2.







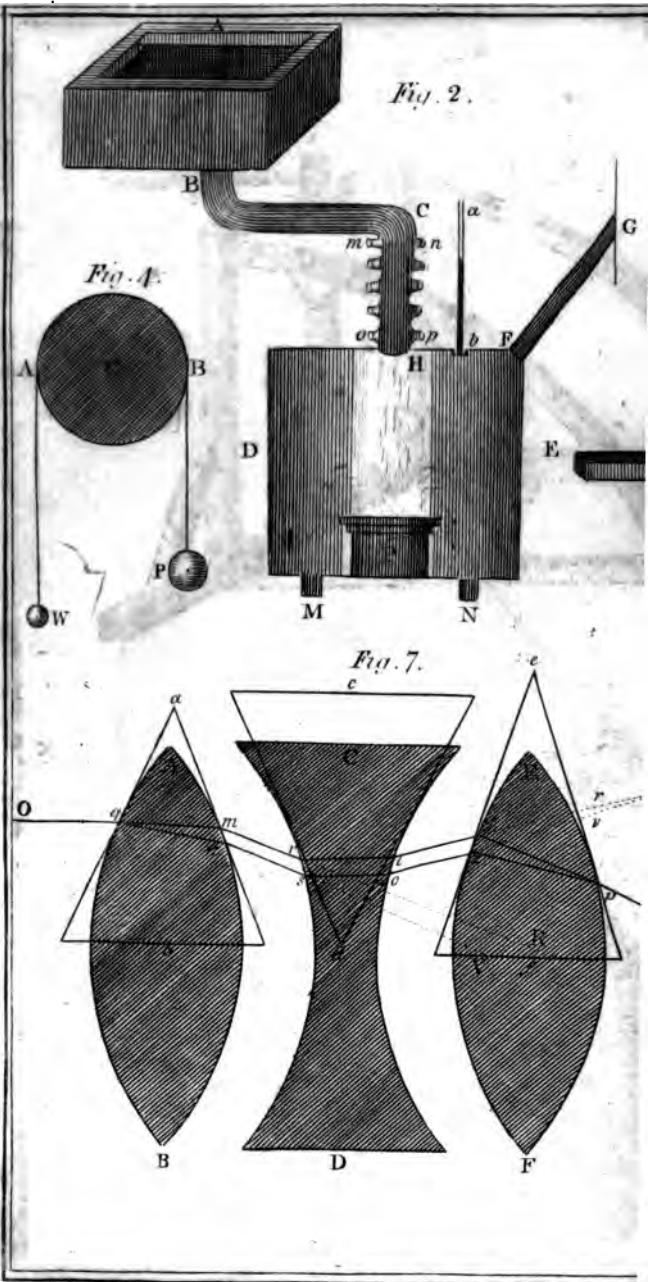


Fig. 1.

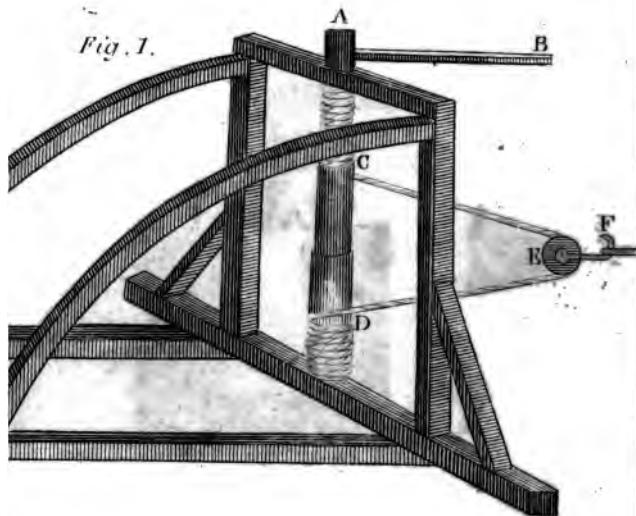


Fig. 5.

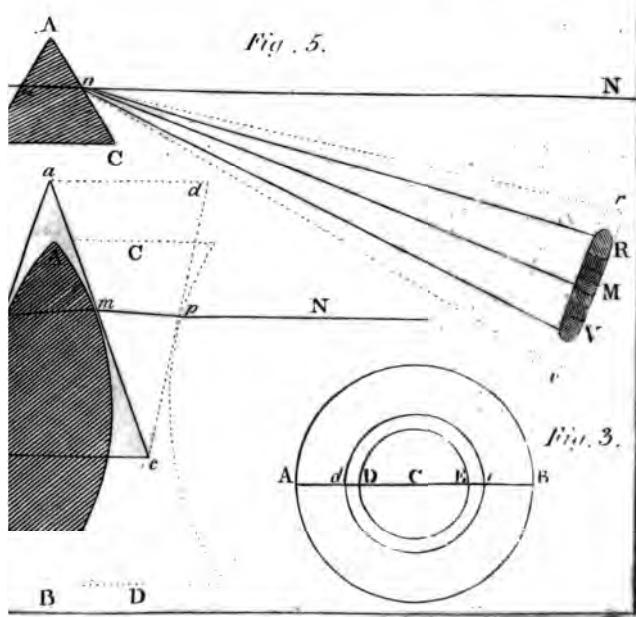
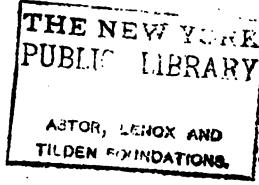
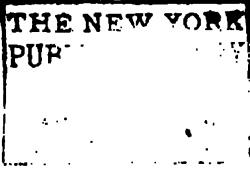
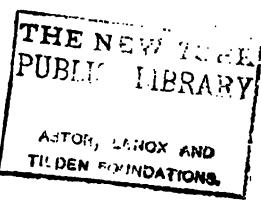


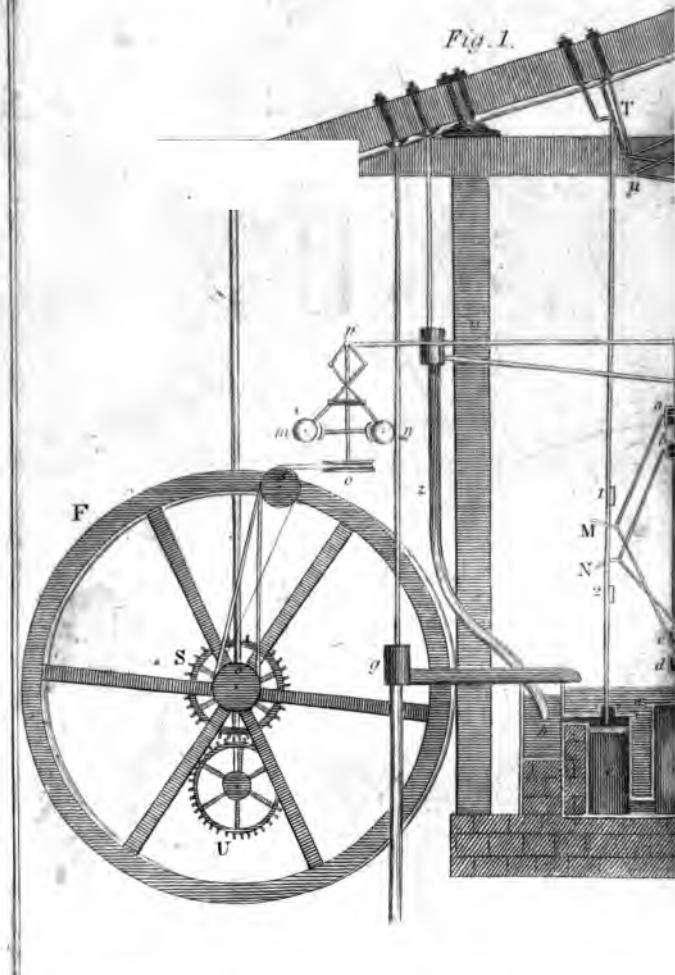
Fig. 3.

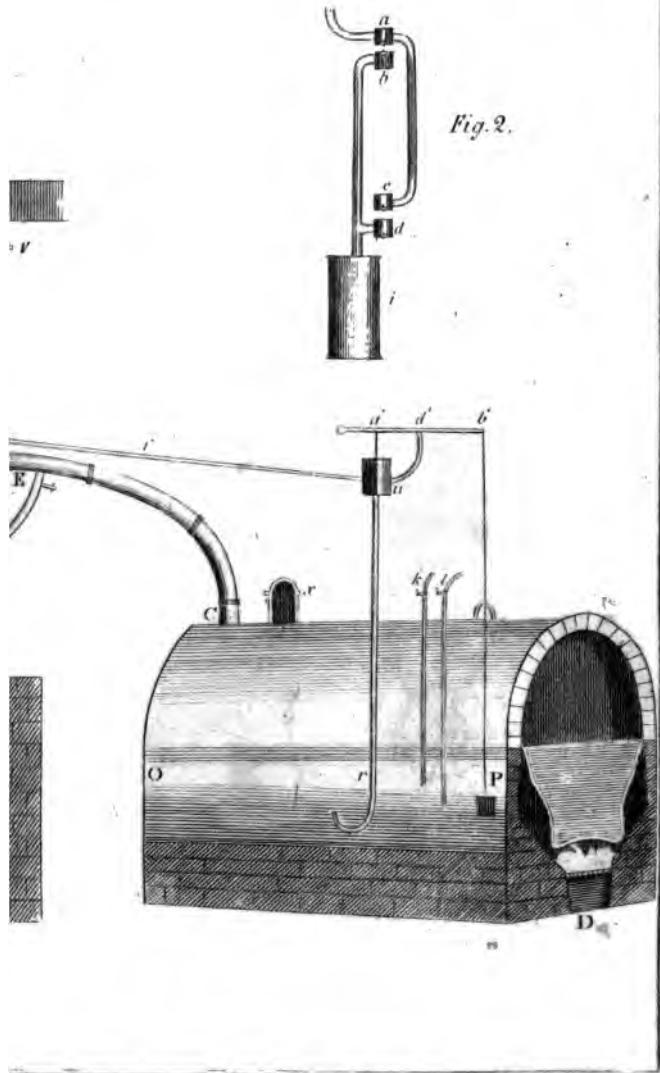
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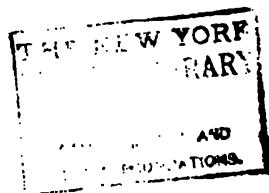


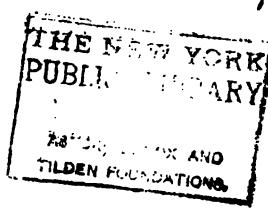












New Fluid Microscope

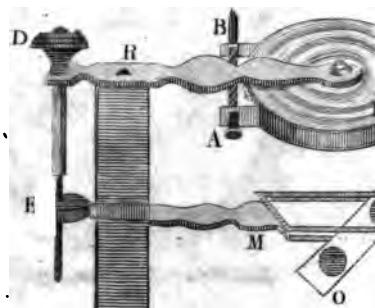
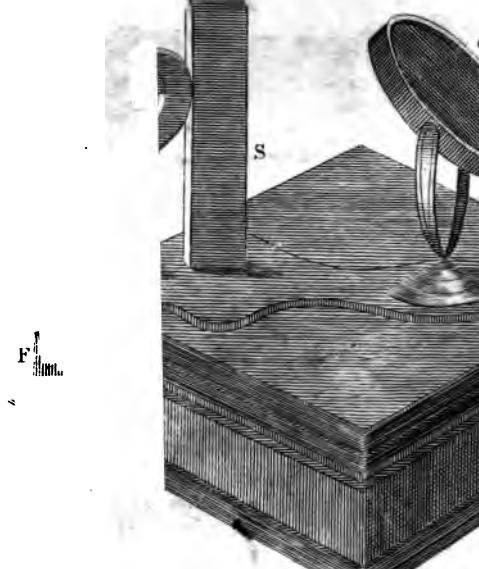
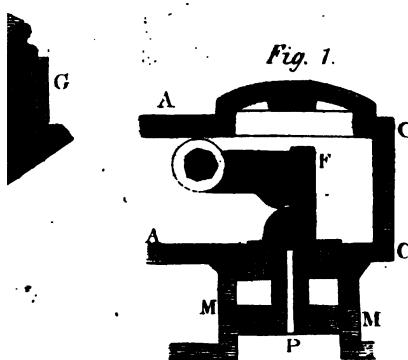
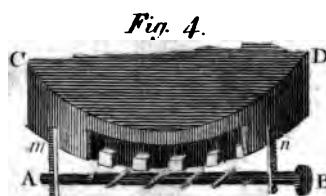
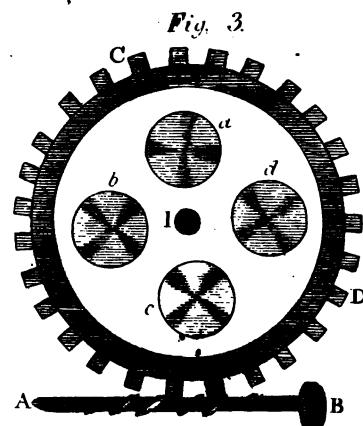
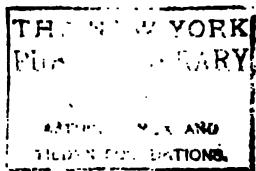


Fig. 2.







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Fig. 5.

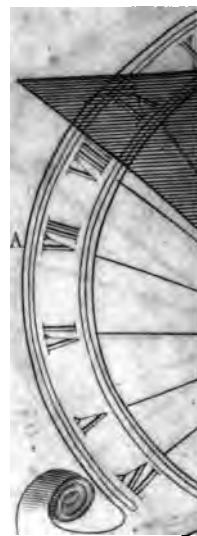
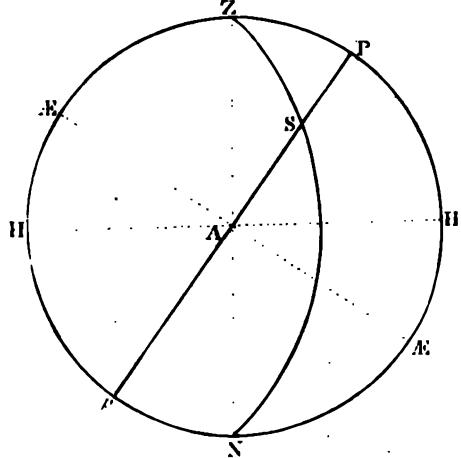


Fig. 7.

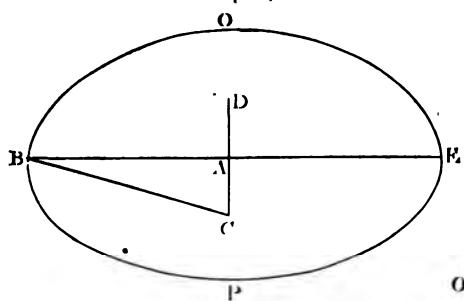


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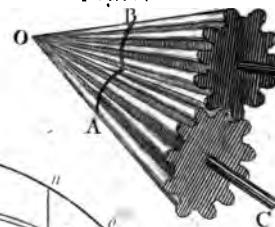
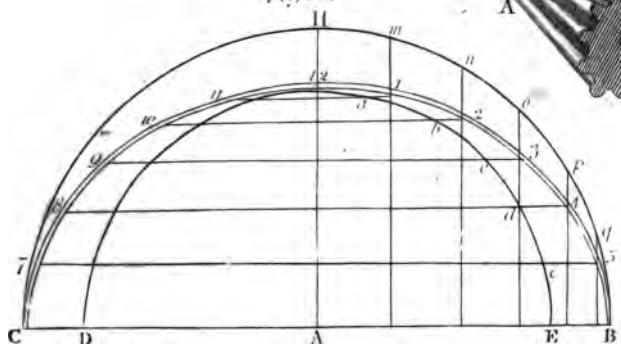
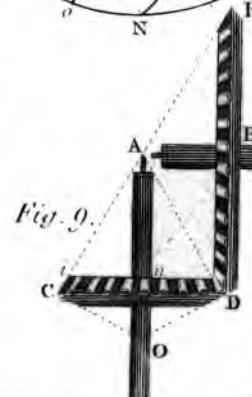
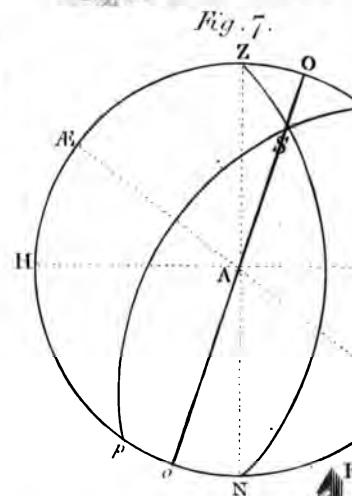
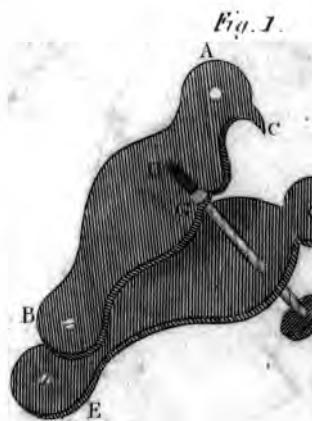
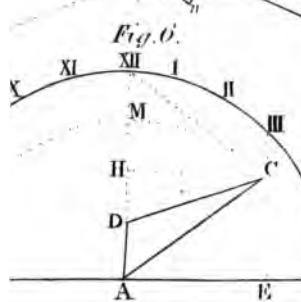
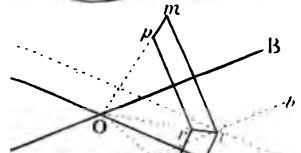
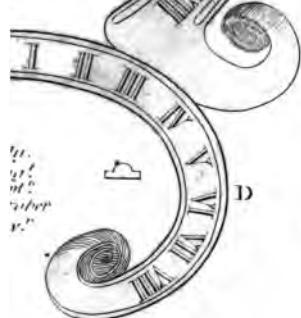
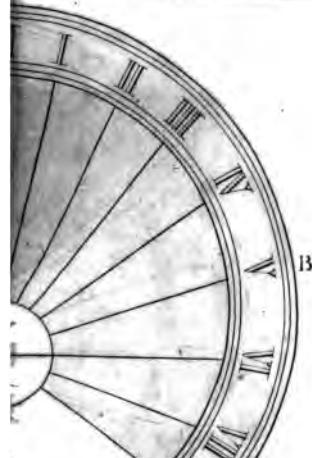
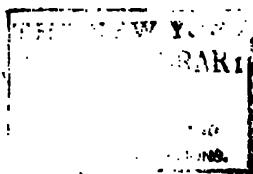


Fig. 3.







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